



الجمعية التونسية لجراحة  
الجهاز العصبي

SOCIÉTÉ TUNISIENNE DE  
NEUROCHIRURGIE

Under the auspice  
of the Tunisian Ministry of Public Health

# WINTER 2023 CONGRESS

Of The Tunisian Society of Neurosurgery

January , 27<sup>th</sup> 28<sup>th</sup> and 29<sup>th</sup> 2023

EL KASBA HOTEL KAIROUAN TUNISIA



*Topic :*

*Intracranial Arterial  
Aneurysm Surgery*



*Precongress Workshop*

*Cervical Spine  
Posterior Screw Insertion*



*Guests speaker :*

**Pr Ali Krisht - LITTLE ROCK USA**

**Dr Vicent Quilis Quesada  
- VALENCIA SPAIN**



*Scientific sessions*

*Conferences  
Oral presentations  
E-posters*



*Abstracts deadline : December 31th 2022*

## **Contacts :**

**Pr Mehdi DARMOUL Email : mehdi.darmoul@yahoo.fr**

**Dr Mouna RKHAMI Email :mounarkhami@gmail.com**

**Dr Lassaad BSILI Email : bsili@yahoo.com**

**Soumission & Inscription : [www.STNCH.tn](http://www.STNCH.tn)**





## WINTER 2023 CONGRESS



### Welcome message

On behalf of the Tunisian Society of Neurosurgery, it is a great pleasure to welcome you to the Winter 2023 National Congress of Neurosurgery that will be held from January 27th to 29th in Kairouan City.

The scientific program is rich and attractive and comprises a main topic about surgical treatment of intracranial aneurysms and many other sessions. We are delighted of the contribution of our honorable guests. They will generously share their experience and knowledge.

You will enjoy the visit of kairouan city, one of the most famous citites in the muslim world, founded in 670 and who prospered under the aghlabite dynasty in the 9th centry. Currently, it retains visitors from all over the world by the unique charm of its medina, its many monuments, and especially by its great mosque which is a real masterpiece.

Finally, we wish you a pleasant stay in Kairouan, a memorable gathering and a succelful great event.

*Congress President*  
Pr. Mehdi DARMOUL

## Pre congress Workshop

Friday January 27th, 2023

## Poster cervical spine screw insertion

VIP HALL 09 :00am- 00:00pm

Chairmen : Pr DARMOUL, Pr BOUAITA, Pr BADRI

09:00- 09 :10am **Trans mass lateral technique**  
Dr MAAMRI – Pr BADRI

09:10-09 :20am **Trans pedicular technique**  
Dr ELKAHLA- Pr DARMOUL

09 :20-00 :00pm **Atelier pratique**

Pr M DARMOUL  
Pr M BADRI  
PAg S BOUALI  
PAg A BENSIR  
PAg Y GDOURA  
PAg K MAAMRI  
Dr MD YEDEAS  
Dr A MLAIKI  
Dr M HADHRI  
Dr G ELKAHLA

## Congress program

IBN SHARAF HALL 02:00 pm-06:30 pm

02:00 pm- 03:00 pm **Oral Presentations Spine**

Chairmen : Pr BOUITA, Pr BADRI, Pr AL MASHANI, Dr ABDERRAHMEN

02:00-02:15pm **Surgery of the upper cervical spine : indications and technique**  
Pr Kamel BOUAITA Algeria

02:15-02:20pm **Surgical management of upper cervical spine trauma**  
M A Hadj Taieb, W Boudabbous, S Farhat, K Maamri,  
M Darmoul Neurosurgery department Monastir

02:20-02:25pm **Therapeutic management of childhood cervical spine trauma  
in the neurosurgery department of the CHU of Bejaia**  
K Djoulane, R Chenna, T Khabil, I Takbou, H Bekralas. Neurosurgery department CHU Bejaia



- 02:25-02:30pm **Percutaneous approach for thoraco lumbar fracture**  
M Wadia, F Bousaadoun, W Lahssini, H Makhlouf, A Bassalah,  
S Benjafer, MA Bennour Orthopedic surgery department Bizerta
- 02:30-02:35pm **Anterior spinal meningioma: Surgical Approaches and technical notes**  
K Somrani, M Rkhami, N Jemel, G Gader, M Zouaghi, S Guédiche, M Badri,  
I Zammel, Department of neurosurgery, Burn and Trauma Center, Ben Arous.
- 02:35-02:40pm **Spinal schwannomas: case series**  
S Lafif, M Ben Messaoud, R Ben Fredj, H Ben Selma, M Chabaane , A Mlaiki,  
I Ksira. Neurosurgery Department, Sahloul Hospital
- 02:40-02:45pm **Primary intramedullary lymphoma : a Case report**  
MA Rachdi, MD Yedeas, H Ammar, S Achoura, R Chkili  
Neurosurgery Departement Military Hospital of Tunis
- 02:45-02:50pm **Faut-il opérer des images?**  
Pr Hafedh JEMEL, N JEMEL, M Ben Hamouda Tunis
- 02:50-03:00pm **Discussion**
- 03:00-04:00 pm **Oral presentations Vascular**  
Chairmen : Pr YEDEAS, Pr BEN SAID, Dr QUILIS QUESADA, Dr RKHAMI
- 03:00-03:09pm **Subarachnoid Hemorrhage caused by intracranial aneurysms:  
Our experience at the National Institute of Neurology.**  
H Mechergui, K Abderrahman, A Hermassi, S Farhat,  
I Ben Said, J Kallel. Neurosurgery department, INN Tunis.
- 03:09-03:18pm **Microsurgical Clipping of Intracranial aneurysms: A Single Center's  
Experience over 16 Years.**  
E Elouni, M Boukhit, M A HajTaeib, H Kammoun, G Elkahla, MM Hadhri,  
K Maamri, A Ben Nsir, M Darmoul. Department of Neurosurgery Monastir, Tunisia
- 03:18-03:27pm **Microvascular clipping approach to treating aneurysmal subarachnoid  
hemorrhage during the last two decades in Sfax City, Tunisia**  
A Maatoug, AA Daoued, F Kolsi , Y Gdoura, MZ Boudaouara.  
Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax
- 03:27-03:36pm **Subarachnoid Hemorrhage caused by intracranial aneurysms : study  
of the Trauma and Burns Center of Ben Arous institutional experience.**  
M Rkhami, G Gader, K Bouzouita, K Belhadj Ali, S Guediche, M Zouaghi,  
M Badri, K Bahri, I Zammel Department of Neurosurgery, Trauma and Burns Center, Ben Arous.





- 03:36-03:45pm **Temporo sylvian anastomosis in the treatment of complex brain aneurysms**  
L Houari, O Metrouh Clinique fatema al Azhar Algeria.
- 03:45-04:00pm **Discussion**
- 04:00pm-04 :15pm **Coffee break**
- 04 : 15 pm- 06:30 pm **Plenary session 1 : Aneurysm Surgery**  
Chairmen : Pr DARMOUL, Pr JEMEL, Pr ELAZHARI, Pr BEN HAMMOUDA
- 04 :15-04 :30pm **Management of intracranial aneurysms in Tunisia : Current state and future trends**  
Pr Mehdi DARMOUL Tunisia
- 04 :30-04 :45 pm **Few triks in aneurysm surgery**  
Pr Abdessamad ALAZHARI Morocco
- 04 :45-05 :00pm **Tunisian Endovascular management**  
Pr Nadia HAMMAMI Tunisia
- 05:00-05 :30 pm **Microsurgical anatomy Pterional approach, sylvian and arachnoid cisterns**  
Dr Vicent Quilis QUESADA Spain
- 05:30-06:00 pm **Posterior communicating and middle cerebral arteries aneurysms surgery**  
Pr Ali KRISHT USA
- 06:00-06 :15 pm **Supra orbital approach for aneurysms in pediatrics**  
Pr Ali AL MASHANI Oman
- 06:15-06:30pm **Discussion**
- 06:30-07 :30 pm **Opening Ceremony : Inauguration of the congress under the high Patronage of the Tunisian Minister of Public Healrh :**  
Professor ALI MRABET
- 08:00- 10 :00 pm **Dinner**



## IBN SHARAF HALL

Saturday January 28th, 2023

### 08:30-09:15 am Oral Presentations Various

Chairmen : Pr BOUDAWARA, Pr KALLEL, Pr BAHRI

08 :30-08:35am **Informed consent in Neurosurgical practice: Assesment of patient's perception at Monastir Neurosurgery Department towards better adaptation.**

Z SOUEI, MM Hadhri, M Boukhit, S Ben Hadda, M Darmoul.

Department of Neurosurgery Monastir

08:35-08:40 am **Prognosis of brain metastases from lung: Survival assesment**

M Bounemra, R Jdidi, M Chabaane, K Saadaoui , I Ksira.

Department of Neurosurgery Sahloul Sousse

08:40-08:45 am **Pituitary region: A hideaway of rare lesions; About 25 cases**

K Somrani, M Rkhami, N Belhaj Mohamed , G Gader, M Zouaghi, A Zehani,

S Guédiche, M Badri, IZammel Department of neurosurgery, Burn and Trauma Center, Ben Arous

08:45-08:50 am **Grade II meningioma: a problematic entity in current practice.**

H Daoud, M Chabaane, M Beltaifa, I ksira. Department of Neurosurgery sahloul sousse.

08:50-08:55 am **Neurosurgical management of brainstem cavernous malformations : a report of 15 patients.**

N JEMEL, E CHAHED, K SOMRANI, M RKHAMI, K GHEDIRA, S BOUALI,

J KALLEL, I ZEMMEL. Department of neurosurgery INN Tunis, Department of Neurosurgery Ben Arous

08:55-09:00 am **Epidemiology of spontaneous subarachnoid haemorrhage in sfax from 2017 to 2022**

A A Daoued, F Kolsi, A Maatoug , I Chérif , Y Gdoura, MZ Boudaouara.

Departement of Neurosurgery Habib Bourghiba Hospital Sfax.

09:00-09:05 am **Pediatric Optic pathway glioma : diagnosis and discussion of therapeutic options**

K Somrani, M Rkhami, A Ben Belgacem, M Badri, K Bahri, I Zammel

Department of neurosurgery, Burn and Trauma Center, Ben Arous, Tunisia

09:05- 09:20 am **Discussion**



09 :20am-00:00pm **Plenary session 2 : Aneurysm Surgery**

Chairmen : Pr KRISHT, Pr BENZAGMOUT, Dr BSILI

09:20-09:50 am **Anterior communicating artery complex aneurysms surgery : indications, techniques and results.**

Pr BENZAGMOUT Morocco

09:50-10:20 am **Middle cranial fossa and cavernous sinus anatomy**

Dr Vicent Quilis Quesada Spain

10:20-10:50 am **Acom and pericallosal arteries aneurysms surgery**

Pr Ali KRISHT USA

10:50-11:10 am **Discussion**

11 :10- 11:40am **Paraclinoid and ophtalmic artery aneurysms**

Pr Ali KRISHT USA

11:40am-00:00pm **Discussion**

00:00-02 :00pm **Lunch**

02:00-04:45 pm **Plenary session 3 : Aneurysm Surgery**

Chairmen : Pr ZEMMEL, Pr KRIFA, Dr BEN AMOR

02:00-02 :30pm **Far lateral approach : microsurgical anatomy**

Dr Vicent Quilis Quesada Spain

02:30- 03:00 pm **PICA Aneurysms surgery**

Pr Ali KRISHT USA

03:00-03 :15 pm **Discussion**

03 :15-03:45 pm **Basilar Artery Aneurysm Surgery**

Pr Ali KRISHT USA

03:45- 04 :00 pm **Discussion**

04:00-04:15 pm **Coffee Break**

04:15- 04:45 pm **Angiogram and brain correlation**

Dr Vicent Quilis Quesada Spain

06:00 -08:30 pm **Inter Department Soccer Tournament**



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## SOCIAL PROGRAM

Sunday January 29<sup>th</sup>, 2023

08 :00-10 :00am Soccer Final Match

10:00am-00:30pm Kairouan Guided tour  
Old town  
Okba Mosque  
Aglabite Basin  
Barrouta  
Abi Zamaa Balaoui Marabout

00 :30 pm End of the Congress

## Posters Sessions :

Session 1 Friday 27<sup>th</sup> : 10:00am-00:00pm Spine –Oncology

Chairpersons : Dr RKHAMI- Dr ACHOURA

Session 2 Friday 27<sup>th</sup> : 02:00pm-04:00pm Vascular-Infections- Head Trauma-  
Malformative

Chairpersons : Dr ABDERRAHMEN- Dr KOLSI



## Bureau

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**Pr. Mehdi DARMOUL**

**Dr. Mouna RKHAMI**

**Dr. Khansa ABDERRAHMEN**

Winter 2023 Congress



# PRECONGRESS Workshop

Posterior cervical Spine  
Screw Insertion

27<sup>th</sup> January  
2023

## ● Cervical spine 3D Printed Model

**Chairmen :** Pr DARMOUL, Pr BOUAITA, Pr BADRI

**Trans Lateral Mass Technique / Dr MAAMRI - Pr BADRI**

**Trans Pedicular Technique / Dr ELKAHLA - Pr DARMOUL**

**Workshop**

Directors :

Pr Mehdi Darmoul  
Dr Mohamed Maher HADHRI

[www.stnch.tn](http://www.stnch.tn)

TOUCOMEX



SOGEMM



**CO1- Subarachnoid Aneurysmal Hemorrhage: features and management of 1658 patients treated in the national institute of neurology**

H Mechergui, Abderrahmen Khansa, Siwar Farhat, Housseem Hdhili, Ben Said Imed, Kermani Nadhir, Kallel Jalel

*Neurosurgery department, INN Tunis*

**Abstract :**

This study was conducted to investigate the epidemiological features of nontraumatic spontaneous SAH treated in the neurosurgical department of the national institute of neurology of Tunis.

The records of 1658 patients admitted From January 1997 to December 2021 for spontaneous subarachnoid hemorrhage were reviewed for analysis

There were 845 (51%) females and 813(49%) males. The mean age was 55. 480 (29%) patients had hypertension history. A potential triggering factors was found in 6.86.

85% of the patients presented with acute headache. The average consultation time is 4 days and only 39 % of patients presented on the same day of symptom's onset. A brain CT scan was performed for all patient. Emergent digital subtraction angiography (DSA) was performed for the diagnosis of SAH sources in the acute stage of SAH in 79%. An aneurysmal rupture was found in 83% of cases.

Among the patients with aneurysmal SAH, 321 cases (9%) had multiple aneurysms, and 1554 aneurysms were detected. The aneurysms mostly originated from the anterior communicating artery (39%), posterior communicating artery (13.8%), and middle cerebral artery (21.4%). Cerebral vasospasm following aneurysmal subarachnoid hemorrhage is the leading cause of death and disability after aneurysm rupture. In our study, it is found in 13% of cases. Moreover, 33% and 46% of the patients underwent microsurgical clipping and coiling of the aneurysm, respectively. The overall mortality in World Federation of Neurosurgeon Score (WFNS) grades 1 and 2 SAH was lesser than that in higher grades (28.6% vs 82.4%)

Of 1320 patients, 247 died within 1 month post-ictus, accounting for an overall mortality rate of 18% in our study.

Among the no aneurysmal SAH cases, 76.5% had negative initial DSA, including 62 cases with peri-mesencephalic non-aneurysmal SAH (PNSAH). Repeated MRI was performed in 400 patients with negative initial DSA, including 45 PNSAH cases.





**CO2- Microsurgical Clipping of Intracranial aneurysms: A Single Center's Experience over 16 Years.**

Elouni Emna, Boukhit M., Haj Taeib MA., Kammoun H., Elkahla G., Hadhri MM., Maamri K., Ben Nsir A., Darmoul M.

*Department of Neurosurgery, Fattouma Bourguiba Hospital, Monastir, Tunisia*

**Abstract :**

Background: The treatment strategies of ruptured intracranial aneurysms (RIAs) include surgical clipping and endovascular coiling, and the efficacy and safety of clipping versus coiling are yet controversial.

Methods: The clinical and radiologic data were reviewed retrospectively. Clinical outcome at follow-up was assessed with Glasgow Outcome Scale, and angiograms were reviewed for the degree of occlusion.

Results: Sixty-three patients with 63 RIAs were included in the analysis. The median age of patients was 52 years, with a male preponderance. Seventeen percent of the patients had deterioration of consciousness on presentation. The confirmation of the diagnosis was made thanks to a cerebral arteriography in seventy percent of our cases. Anterior communication artery aneurysm and posterior-inferior-cerebellar-artery aneurysm were most common in the anterior and posterior circulation, respectively. The perioperative complication rate was 15%. Ninety-two percent of surgeries were performed by pterional approach. The overall surgical morbidity and mortality were 4.2% and 3%, respectively.

Conclusions: Surgical clipping is effective and can provide a good long-term outcome. The experience of the individual surgeon is important for a superior and enduring overall outcome. An increase in the rate of coiling in recent years has affected the outcome rate after surgery that calls for further evaluation.

**CO-CO3- Microvascular clipping approach to treating aneurysmal subarachnoid hemorrhage during the last two decades in Sfax City, Tunisia**

Ahmed Maatoug, Daoued A.A.

Kolsi F. Gdoura Y. Boudaouara M.Z.

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

**Abstract :**

Non-traumatic Subarachnoid hemorrhage (SAH) is a deadly kind of stroke that commonly results from a burst intracranial aneurysm. It involves the extravasation of blood into the spaces surrounding the central nervous system that are occupied by cerebrospinal fluid.

Despite making up a very small portion of all strokes, it has significant negative effects on morbidity and death.

Symptoms of a non-traumatic subarachnoid hemorrhage include the extravasation of blood into the compartments surrounding the central nervous system that are normally filled with cerebrospinal fluid.

The anticipated, prevention and control of the subsequent complication are the main goals of SAH patient care.

Currently, aneurysm clipping surgery and endovascular coiling are the two primary treatment approaches for securing a burst aneurysm.

An updated assessment of the epidemiology of aneurysmal SAH and the microvascular clipping approach in our neurosurgery department at the "Habib Bourghiba" University Hospital of Sfax during the last 20 years is provided in this article, serving as a foundation for future clinical investigations targeted at reducing the burden of this neurological condition.

#### **CO-CO4- Subarachnoid Hemorrhage caused by intracranial aneurysms: study of the Trauma and Burns Center of Ben Arous institutional experience**

Mouna Rkhami, Ghassen Gader, Kaïs Bouzouita, Kerima Belhadj Ali, Skander Guediche, Mohamed Zouaghi, Mohamed Badri, Kamel Bahri, Ihsèn Zammel  
*Department of Neurosurgery, Trauma and Burns Center, Ben Arous*

#### **Abstract :**

**Introduction:** Spontaneous subarachnoid hemorrhage is caused by the rupture of an intracranial aneurysm in 80% of cases. Early identification and treatment of the aneurysm can prevent aneurysm rerupture and address sequelae. The outcome mainly depends on surgeons and anesthesiologists experience, and the quality of the technical dispositive in neurosurgical and interventional radiology operative rooms.

**Methods:** We report our institutional experience of non traumatic subarachnoid hemorrhage related to intracranial aneurysms, treated in the neurosurgical department of the trauma and burns center of Ben Arous. We went through a study of the evolution course depending on the therapeutic approach.

**Results:** We admitted 201 patients for a subarachnoid hemorrhage during the period ranging January 2018 and December 2022. Vascular imaging showed an aneurysm in 159 patients. 138 aneurysm were anterior, and 21 were posterior. Among these patients, 39 had an hydrocephalus, 18 presented a vasospasm, and 5 a re-bleeding. 28 patients died before any aetiologic treatment. 16 patients were operated for exclusion of the aneurysm, whereas 113 had an embolization. 11 patients died after the aetiologic treatment.





Conclusions: Aneurysms remain the most common cause and are associated with a very high rate of complications. Open-surgical treatment may be preferred given the greater durability of the open-surgical treatment. Otherwise, endovascular treatment could be provided instead.

**CO-CO5- Temporo sylvian anastomosis in the treatment of complexe brain aneurysms**

Pr HOUARI Loucif, METROUH Oussama  
*Clinique fatema al Azhar , Alger*

**Abstract :**

Complexe aneurysms surgery is challenging for neurovascular surgeons, brain revascularisation by the temporosylvian anastomosis might be a solution for the deconstruction / reconstruction surgeries.

we report in this presentation the mindset around the decision making through cases of fusiform, thrombosed and large aneurysms

**CO-CO6- Informed consent in Neurosurgical practice: Assesement of patient's perception at Fattouma Bourguiba University Hospital towards better adaptation.**

Zohra SOUEI, Hadhri M.M., Boukhit M., Ben Hadda S., Darmoul M.  
*FATTOUMA BOURGUIBA UNIVERSITY HOSPITAL*

**Abstract :**

Obtaining a valid informed consent is of vital importance to neurosurgeons. This study aimed to assess the process of informed consent IC and patients' experience in neurosurgical practice and propose a more adaptive model.

We conducted an observational transversal study. Postsurgical patients in the neurosurgery department of Fattouma Bourguiba University Hospital were interviewed before hospitalisation discharge. An independent physician from the surgical team administered the questionnaire.

The written IC form was given to 100% of those interviewed. All recipients of the form signed it, either personally or through a delegate. One in two patients said that they read it thoroughly. Of those who reported to have read it, 84% judged it to be clear. The majority of cases (61%) came from a rural area and 51% were either illiterate or only attended primary school. Most attention was given to the risks and complications which were communicated to 80% of the patients. Only 40% of the patients believed that the information provided was sufficient.

The current written IC is insufficient in assuring patients and making them aware of the choices they made for their health. To improve the quality of information we suggest





enhancing physicians' communication skills and for them to use, when needed, vulgarised terms to ensure that their patients are completely informed before undergoing their procedures.

### **CO7- PROGNOSIS OF BRAIN METASTASES FROM LUNG CANCER : SURVIVAL ASSESSMENT**

Maila Bounemra, Jdidi R., Chabaane M., Saadaoui K., Ksira I.

*Department of Neurosurgery of the University Hospital Center of Sahloul Sousse*

#### **Abstract :**

The incidence of brain metastases in lung cancer has been steadily increasing in recent years, due to advances in diagnostic techniques and longer survival of cancer patients. The appearance of cerebral metastases should no longer lead to the patient being referred to palliative care units, but should lead to a reflection on all the available therapeutic means which must be adapted to the main prognostic factors of the patient.

We propose to describe the epidemiological criteria of brain metastases of lung cancer and to evaluate the survival according to the nature of the treatment of the metastasis, its histological type, the number and the location in the brain.

Methods: This is a retrospective study of 107 observations of brain metastases of lung cancer collected in the department of neurosurgery at the University Hospital Center of Sahloul Sousse, departments of pulmonology and radiotherapy at University Hospital Center Farhat Hached Sousse between the years 2007 and 2016.

Results: Our population contains 99 men and 8 women. The mean age was 56.4 years.

The median time between the diagnosis of brain metastasis and the diagnosis of the primary cancer was 30 days. Brain metastasis was the circumstance of discovery of lung cancer in 65 cases (61%). Intracranial hypertension was the most frequent mode of revelation (54.1% of cases). 29.9% of cases had metastasis removal and 67% of patients had encephalic radiotherapy alone. The median overall survival for all factors

### **CO8- Pituitary region: A hideaway of rare lesions; About 25 cases**

K Somrani, M Rkhami, N Belhaj Mohamed , G Gader, M Zouaghi, A Zehani, S Guédiche, M Badri, IZammel

*Department of neurosurgery, Burn and Trauma Center, Ben Arous*

#### **Abstract :**

Background : Tumors of the pituitary and the sellar region account for 10 to 15% of all expansive intracranial processes. They include a variety of neoplastic, inflammatory, vascular and developmental lesions. Even if studies have shown that pituitary adenomas represent 90% of these lesions, other possible diagnoses should be kept in

mind considering that the therapeutic strategy varies from one lesion to another. The aim of our work is to reveal all the rare lesions that occur in the sellar region and to establish for each one the most frequent clinical and paraclinical features, in order to select the appropriate therapeutic strategy.

Methods: We performed a multicentric retrospective descriptive study, including patients of neurosurgery departments of Burn and trauma center and the Mongi Ben Hamida National neurology institute during a five-year time interval (from 2013 to 2018).

Results: We were able to collect 25 cases with an average age of 40.5 years, presenting 12 different diagnoses including neoplastic, inflammatory, vascular and developmental lesions. We were able to confirm the rarity of non adenomatous sellar lesions in comparison with pituitary adenomas (9%). Clinically neurologic symptoms were the most frequent, followed by ophtalmological symptoms. Abnormalities in the biological work-up were not as frequent as expected by the bibliographic study. Neuroimaging allowed us to classify the lesions into 3 categories: sellar pure, sellar and suprasellar and sellar and parasellar. Surgical removing of the tumors showed that the neoplastic lesions are the most frequent since non neoplastic lesions were only found in 24% of the cases.

Conclusion: A proper study of rare diseases such as non-adenomatous sellar lesions requires a thorough knowledge of these pathologies, a further specialization in pituitary surgery, as well as an improvement of the paraclinical exploration techniques, in order to refine both diagnosis and therapy.

### **CO9- Grade II meningioma: a problematic entity in current practice**

hatem daoud, chabaane.m Beltaifa ksira.i  
*neurosurgery department sahloul sousse*

#### **Abstract :**

Between grade I meningioma, which are generally benign and rarely recurrent, and frequently recurrent grade III meningioma: grade II meningioma represent an intermediate category. Through our study, we tried to identify clinical, radiological and anatomopathological elements of presumption of recurrence. 23 patient files were studied: 21 cases of intracranial meningioma and 2 cases of intraspinal meningioma. All the patients were operated, and an anatomopathologic confirmation had concluded with a grade II meningioma. The median age was 55 years and the sex ratio was 1.87. The symptomatology was related to the tumor localization and dominated by focal neurological signs and headaches. For intracranial grade 2 meningiomas, tumor localization predominates at the level of the convexity (56.6%). On the brain scan, the lesion was isodense in 76.2% of cases and took up PDC homogeneously (61.9%). In MRI, the lesion is often in hypo- or iso-signal in T1, and in hypersignal in T2. Only one



patient received postoperative radiotherapy. There are 26.1% of tumor recurrences, with an average delay of 27.2 months. There were 6 deaths for the entire series. Grade 2 meningioma is always difficult to manage. Although it is a frequent pathology in Neurosurgery where surgery is the gold standard treatment modality, grade II meningioma remains a problematic entity in current practice, given the absence of clear therapeutic planning and precise factors of the prognosis.

**CO10- Neurosurgical management of brainstem cavernous malformations: a report of 15 patients.**

JEMEL N., CHAHED E. SOMRANI K. GHEDIRA K. BOUALI S. KALLEL J.

*Burns and Trauma Center, Ben Arous*

**Abstract :**

Brainstem cavernous malformations (BSCMs) are complex lesions that are difficult to access and highly variable in size, shape, and position.

We performed a retrospective review of patients with BSCMs referred to the department of neurosurgery in two centers in Tunis (INN and CTGB) from 2005 to 2019.

In total, 15 patients were reviewed. The mean patient's age was 40.5 +/- 18.5. with the sex ratio of 1:2. Five patients (30%) had multiple lesions. The most common location was the midbrain. Developmental Venous Anomaly (DVA) was absent in all patients. Five brainstem cavernomas had presented ICH and ten patients had a focal neurological deficit. Six patients were treated conservatively and nine had a microsurgical resection.

The series above highlights the common manifestations of brainstem cavernous malformation. The treatment is always challenging. A good preoperative strategy using BSCM grading system and anatomical taxonomy is useful to guide the clinical decision.

**CO11- Epidemiology of spontaneous subarachnoid haemorrhage in sfax from 2017 to 2022**

Ahmed Amine Daoued, Kolsi F. Maatoug A. Chérif I. Gdoura. Y Boudaouara M.Z.

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

**Abstract :**

Spontaneous subarachnoid haemorrhage (SAH) is a bleeding into the subarachnoid space without trauma, representing the third most common subtype of stroke. Over the past few decades, the incidence has dropped, due in part to lifestyle modifications including quitting smoking and controlling high blood pressure.





In 80% of cases, aneurysms constitute the root reason. Arteriovenous malformations, anticoagulation, vasculitis, and brain tumours are a few more potential causes. Up to half of individuals with SAH pass away because of this dangerous condition. Only half of those who survive go back to work, and many have a lower quality of life and a higher risk of developing long-term neuropsychiatric consequences like depression.

Emergent therapeutic approaches concentrate on controlling hypertension, bleeding disorders, coagulopathies, and, most critically, early aneurysm therapy using either endovascular coiling or neurosurgical clipping to prevent any potential rebleeding.

Based on patient medical records from our neurosurgery department at the "Habib Bourghiba" University Hospital of Sfax, we intend to conduct a prospective cohort analysis on the epidemiology, management, and outcomes of SAH, starting from the 1st of January 2017 to 31st of December 2022.

This paper intends to provide epidemiology variables of SAH, including demographic trends, Fisher grade, number, position, and dimensions of aneurysms, procedure method, and associated morbidity, for upcoming research trials.

### **CO12- Pediatric Optic pathway glioma : diagnosis and discussion of therapeutic options**

K Somrani, K Somrani, M Rkhami, A Ben Belgacem, M Badri, K Bahri, I Zammel  
*Department of neurosurgery, Burn and Trauma Center, Ben Arous, Tunisia*

#### **Abstract :**

# SPINE

## **P1- vertebral hydatosis**

*Hamdadou Boudjellal, Ghoul R.B., khelifa T., Trade R.*

*Service de neurochirurgie hôpital militaire universitaire régional d'ORAN Algérie*

### **Abstract :**

Hydatidosis is an anthroozoonosis caused by the larval form of tapeworm of the genus *Echinococcus granulosus*. Vertebral hydatidosis is rare and represents only 1 to 2% of all locations, even in endemic areas. It remains the most frequent and most serious localization of bone hydatidosis. We present a case in a 28-year-old young man who consults in a spinal cord compression chart and whose spinal MRI finds osteolytic cystic lesions of the posterior arch from Th4 to Th5. The patient is operated in emergency, with a good postoperative evolution (total recovery).

## **P2- Spinal subdural hematoma with cauda equina syndrome: An uncommon complication in a patient taking acénocoumarol.**

*Khansa Abderrahmen, Khalil Ghdira, Nesrine Ncib, Jalel Kallel Department of Neurosurgery, National Institute of Neurology of Tunis. Road Jebbari 1007 the Rabta Tunisia.*

### **Abstract :**

Study design: case report

Background: Spinal subdural hematoma is a rare situation of Acenocoumarol bleeding incident that can rapidly lead to spinal cord or cauda equina compression with potential devastating consequences.

Objective: to draw attention to this complication that must be evoked in any patient treated by VKA with rapidly progressive signs of spinal cord or cauda equina compression.

Case report: a 61 year old man on Acenocoumarol therapy for mitral valve replacement presented to our emergency department for rapid onset of flaccid paraplegia of 9 days duration with bowel and bladder incontinence. MRI revealed a subdural space occupying lesion extending from L2 to L5 compressing the cauda equina. After a rapid correction of hemosatosis disorders urgent laminectomy with evacuation of an extensive

subdural hematoma was performed. Post operative course was uneventful with complete recovery of preoperative paraparesis and complete disappearance of sphincter disturbances.

#### Conclusion

The knowledge of MRI appearance with respect to the chronological stage of the bleed is essential for an accurate and early diagnosis of spinal subdural hematoma. Rapid correction of bleeding disorders is mandatory and an emergent surgical evacuation of the hematoma is often the only therapeutic option to avoid catastrophic and permanent neurological deterioration.

### **P3- complications of herniated disc surgery in the neurosurgery department of the university hospital of Oran**

Daoud Souad, Ferrah Sofiane; Messid Meflah Houria

*Neurosergery departement of Oran -ALGERIA*

#### **Abstract :**

Introduction: Surgical treatment of lumbar disc herniation is widely used, and the success rate is usually estimate to be between 80 and 98% according to studies published in the literature. However, this surgery is not without complications. As with any surgery, there are general complications (related to general anesthesia, decubitus and the patient's condition ....) and complications related to disc surgery (dural, vascular, neurological and infectious injuries ...).

The aim of this work is to describe these complications, their management as well as their prevention

Materials and methods: This is a retrospective study of 77 patients operated on by conventional approach for lumbar disc herniation in our neurosurgery department between 2014 and 2018. Posterior inter laminar approach was performed in 32 patients, laminectomy in 05 cases, hemi laminectomy in xx cases, with additional foraminotomy in 20 patients.

The evaluation appreciated by consulting the operative reports, the postoperative follow-up and the short and long-term consultation.

Results: Intra operatively, we had a dural breach in 02 patients and radicular damage in one patient. In the immediate postoperative period, 03 cases of wall infections, with



persistent pain in 19 cases, late hernia recurrence was encountered in 10% of cases, and finally, postoperative fibrosis in 4% of cases.

Conclusion: Despite the common use of lumbar disc herniation surgery, exposed to various complications, dominated by dural

#### **P4- Injury to the lower cervical spine in adults: about a series of 116 cases**

Daoud Souad, Ferrah Sofiane; Messid Meflah Houria

*Neurosergery departement of Oran -ALGERIA*

##### **Abstract :**

Cervical spinal trauma is a frequent pathology and a major public health problem.

Our work is a retrospective, descriptive study of 116 cases of lower cervical spine trauma treated in our neurosurgery department of the university hospital center of Oran &#8211; Algeria; from January 2016 to December 2021. The average age of our patients is 31 years old, with a clear male predominance, in fact 86.3% of our patients are male. The etiologies were dominated by accidents on the public highway (66.7%), followed by diving accidents (15.7%), falls (11.8%) then sports accidents, work accidents and intentional blows and injuries (2 %). 39.2%% of our patients had a normal neurological examination and only accused a spinal syndrome, 60.8% of patients presented with neurological disorders. We found that 60.1% of patients admitted with neurological disorders were classified ASIA D, and the rest were distributed almost equally between ASIA C, B and A respectively 16.1%, 9.6% and 12.9%. spinal scan, only 73% benefited from magnetic resonance imaging. Dislocations and fractures dislocations represent the most frequent lesions (53.2%). The anterior approach was used in 100 patients, and the posterior approach in 16 patients. Neurological improvement was seen in 72.4% of cases who had neurological disorders. The most common complication in our series is decubitus pneumopathy We deplore 5 deaths during our study, which corresponds to a mortality rate of 4.3%. All five cases were AIS A patients

#### **P5- Os odontoideum: A Rare Malformation of the Cervico-Occipital Joint: A Case Report and Literature Review**

*Ghorbel Mohamed, Borni M, Adelmouleh S, Abdelhedi A, Boudawara M Z*

*Service de Neurochirurgie de l'Hopital Habib Bourguiba de Sfax*

##### **Abstract :**

The os odontoideum, or mobile odontoid apophysis, is a rare malformation of the cervico-occipital joint. It is a failure of the odontoid center of ossification to unite with the

body of the axis. The actual incidence of this malformation is difficult to specify since many cases are asymptomatic.

We report the case of a 22-year-old man who suffered a cervical spine injury at the age of 3 years and had experienced recurrent cervicgia for 2 years with persistent torticollis and a one-year history of heaviness in all four limbs. The physical examination revealed spastic tetraparesis with atrophy involving the muscle groups of all four limbs without associated sensory disturbances. Standard cervical radiography showed hyperlordosis of the cervical spine with odontoid-axial dislocation. A cervical MRI confirmed the dislocation between the atlas and the odontoid, which was responsible for the major compression of the medullary junction. The patient's symptoms improved after neurosurgical treatment through the posterior route and osteosynthesis, followed by functional rehabilitation.

The etiology of this malformation is unknown and it can be asymptomatic or cause neck pain, torticollis, dizziness, or muscle weakness. Diagnosis involves imaging techniques such as radiography, CT, and MRI. Treatment options include surgery for symptomatic patients and monitoring for asymptomatic individuals.

### **P6- Dorsal extradural hematoma following spinal anesthesia: case report**

*Ferrah Sofiane, Daoud souad*

*Department of Neurosurgery Oran University Hospital; ALGERIA*

#### **Abstract :**

The spine extra dural hematoma is the accumulation of the blood between the dura mater and the spinal bone, which can cause spinal cord compression, it is an extreme neurosurgical emergency, and the functional prognosis may be engaged. Its overall incidence is approximately 1 per 1.000.000 people per year (Perron 2013)

Our case is a young man aged 25, who underwent dorsal spinal anesthesia (T4-T5) for thoracic surgery (recurrent pneumothorax), the patient presented a few hours after the procedure a paraplegia with predominance on the left and hypoesthesia below the lesion.

Spinal MRI was performed urgently, which showed the presence of an extradural hematoma extending over five levels with spinal cord compression.

The post-operative follow up was very favorable



**P7- Fracture of the odontoid process associated with spina bifida of the atlas, about one case**

*Ferrah Sofiane, Daoud souad*

*Department of Neurosurgery Oran University Hospital; ALGERIA*

**Abstract :**

Odontoid fractures are neurosurgical lesions, accounting for 10 to 15% of cervical spine fractures, which are difficult to manage. Reporting to us the case of a 65-year-old woman; victim of a traffic accident with a fractured odontoid. The clinical examination was bordering on normal except for the hyperalgesic neck pain with bruising on the posterior aspect of the neck. The neuro-radiological workup was in favor of a fracture of the odontoid process with an anterior displacement (OBAV) in an osteoarthritis spine. The indication for a posterior lacing (C1-C2) has been made. Intraoperative, C1 posterior arch spina bifida was discovered which was not detected on radiological examinations. Our course of action was to make a lacing as follows: used two threads; make two loops each in a semi-arc then tie the two threads under the thorn machine of C2. The postoperative clinical and radiological consequences very favorable at 6 months.

The surgical management of odontoid fractures is well codified, sometimes difficult because of lesions or associated malformations of the spine

**P8- Extra medullary hematopoiesis: an extremely rare cause of Spinal cord compression**

*Hatem. Daoud, Chabaane.M, Ben Frej.R, Ben massoud.M, Mlaiki.A, Ksira.I*

*Neurosurgery department Sahloul Sousse*

**Abstract :**

Extra medullary hematopoiesis is a compensatory phenomenon with chronic overproduction of red blood cells and it is commonly observed in various hematological disorders. This phenomenon is habitually asymptomatic and it induces rarely a compression of adjacent organs such as the spinal cord

We present the case of a 34-year-old man was referred with a 1-year history of urinary incontinence and a 3-month history of progressive leg weakness. He had been diagnosed as having thalassemia intermedia at the age of 4 years. The physical Examination revealed hypoesthesia at the T6 levels and in the perianal region, both



lower limbs were severely paretic with hyperactive deep tendon reflexes, bilateral plantar extensor responses and sustained clonus in both legs. Spinal MRI performed showed paravertebral soft tissue masses extending from T4 to T8 in the posterior part of the spinal canal and compressing the spinal cord. Total laminectomy T4-T8 with biopsy of the paravertebral masses was performed. Histopathological evaluation confirmed extra medullary hematopoiesis

In the presence of a tissue mass in a patient with of chronic blood disease, it is important to mention the diagnosis of extra medullary hematopoiesis. The clinical examination and radiological explorations confirm the diagnosis. Treatment of extra medullary hematopoiesis may include radiotherapy, transfusions, surgery, corticosteroid therapy or a combination of these different modalities.

### **P9- Spinal angioliopoma a rare cause of spinal cord compression**

*Hatem Daoud, Ben Selma H, Chabaane M, Mlaiki A Ksira I*

*Neurosurgery department Sahloul Sousse*

#### **Abstract :**

Angioliopoma is a benign tumor that usually appear as painful subcutaneous nodule, in the forearm, trunk, or neck but It is a rare cause of spinal cord compression. We present tow cas of Spinal angioliopoma responsible for spinal cord compression .The first one: a 54-year-old man who was referred with back pain associated to heaviness in the lower limbs witch progressed over a period of 2 years. Physical examination revealed positive Babinski signs without motor deficit in lower limb. A sensory level was found at T8. A spinal MRI was performed. An epidural mass posterior to the cord at the level of the T7 vertebral body was demonstrated. Total laminectomy T6-T9 was performed and the tumor was totally removed. Histopathological evaluation confirmed a angioliopoma. The second case: a 44-year-old woman who was referred with back pain not improved by medical treatment associated to sphincter disorder witch progressed over a period of 1 years. Physical examination revealed positive Babinski signs and a paraplegia without sensory level. A spinal MRI was performed. An extradural mass posterior to the cord at the level of the T10 T11 vertebral body was demonstrated. Total laminectomy T10-T11 with total tumor resection was performed. Histopathological evaluation confirmed a angioliopoma. Spinal angioliopoma should be considered as an extremely rare cause of spinal cord compression. Magnetic resonance imaging is important for the diagnostic. The gold standard treatment modality is surgery

**P10- the Tarlov cyst: an entity not to forget**

*Hatem Daoud, Ben Fraj.R, Cchabaane.M, Ben Massoud.M, Mlaiki.A, Ksira.I*

*neurosurgery department sahloul sousse*

**Abstract :**

Tarlov or perineurial cysts are lesions of the nerve root arising from pathologically increased hydrostatic pressure in the spinal canal. They are often found in the sacral region. These cysts are a rare source of pain and should be followed but patients with symptomatic Tarlov cysts should be treated surgical We present the cas of a 42-year-old man presented with a 4-month history of increasing sacral, left buttock, and left posterior thigh and leg pain without sphincter disorder. This pain was worsened by standing and walking and relieved by sitting. the patient presented an intermittent spinal claudication disorder. The clinical examination revealed a normal strength and tone were with a hypoesthesia in the territory of S2. Deep tendon reflexes were present and symmetrical. Sphincter tone was normal. Magnetic resonance imaging demonstrated a 2cm cystic mass occupying the sacral canal, with bone erosion and compression of sacral nerve roots. Sacral laminectomy revealed that the cyst originating from the right S-2 nerve root and compressing both S-2 nerve root sleeves and causing bone erosion of the sacral canal. The Tarlov cyst was resected and the neck was ligated. The patients' neurologic symptoms improved postoperatively specially the pain. Although symptomatic Tarlov cysts are rare, they should be considered in the differential diagnosis of sacral radiculopathy and sacral pain syndromes. The management of symptomatic Tarlov cysts continues to be a matter of debate.

**P11- Intramedullary meningioma: A case report**

*Naceur Myriam, Slimane A, Nessib N, Ghedira K, Kermani N , Kallel J*

*Nerosurgery departement, National Institute of neurology Tunis*

**Abstract :**

Introduction: Intramedullary meningioma is a rarely reported clinical entity. As far as we know, only three cases have been reported to date. We describe a further case at the cervical level and review the few published cases.

Clinical case: This is a 38-year-old man who consulted for paresthesias with weakness in the left upper limb of progressive aggravation, without walking disorder or sphincter



disorders. On examination, there was a distal deficit in the left upper limb associated with amyotrophy of the thenar eminence muscles. There are no objective disorders of There are no objective sensitivity disorders. The spinal cord MRI shows a well-limited cervical intramedullary tumor extending from C5 to C7, well limited, in heterogeneous iso signal in T1 and T2, with a moderate gadolinium gadolinium uptake.

Anatomopathological examination and immunohistochemical study concluded to a meningioma.

Conclusion: Intramedullary cervical meningiomas are very rare and have been reported only five times before. Because of its tendency to recur after surgery and because of a possible aggressive behaviour, meticulous histopathological examination is mandatory to predict the evolution and plan the follow-up. Outcome is mainly related to the type of tumour and the complete removal.

### **P12- Aneurysmal bone cyst of the spine About 4 cases and review of the**

**literature** *Naceur Myriam, Kermani N, Belhadj A , Slimane A , Guedira K , Kallel J  
Nerosurgery departement, National Institute of neurology Tunis*

#### **Abstract :**

The aneurysmal bone cyst (ABC) is a benign tumor of unknown pathogenesis, with potentially aggressive behavior, and a highly vascularized osteolytic nature. . they represent 1.5% of spinal bone tumors. They mainly affect young people. We propose to study the clinical manifestations, the radiological aspects and the therapeutic means of this lesion.

Four patients were operated in our department of aneurysmal cysts of the spine (2 men and 2 women), over a period of 15 years. The age of the patients were 16, 18, 26 and 52 years old. All data were included and analyzed.

The clinical manifestations were gait disorders in 2 patients, one of whom was paraplegic. one of whom was paraplegic and low back pain in the other two. The

The tumor was located dorsally in 2 cases and lumbar in the other two cases.

It involved the posterior arch of the vertebrae in 2 patients and presented an and corporal invasion in half of the cases. Tumor removal was complete in 2 patients and the laminectomy was limited to the site of compression. Postoperatively, clinical signs improved in all patients. Only one case presented an extensive tumor recurrence requiring a second operation with osteosynthesis.

Surgical resection, radiotherapy, and embolization are effective in managing adult spine ABCs.



### **P13- Extradural Neurinoma: A Case Report and Review of the Literature**

*Naceur Myriam, Slimane A, Sliiti F, Belhadj A, Kermani N, Kallel J*

*Nerosurgery departement, National Institute of neurology Tunis*

#### **Abstract :**

Spinal schwannomas are benign tumors accounting for 30% of all spinal tumors. They originate from the shwann cells of the spinal roots and can occur sporadically or as part of a neurofibromatosis type 2 (NF2).

Classically, neurinomas develop in the subdural space, however, it is not uncommon to observe an extradural contingent by invasion of the dura mater. Purely extradural forms are exceptional.

We report the case of a 47-year-old male with no medical background who presented with low back pain associated with intermittent spinal cord claudication and vesicosphincter disorders.

The physical examination reveals a paraparesis, pyramidal syndrome in the 2 lower limbs and a thermoalgic hypo-sensitivity of level D 12.

MRI reveals an extra-axial lesion with a center at the left foraminal level of D9 with polylobed contours, T1 isosignal, T2 hyper signal, intensely enhancing after injection of the contrast medium.

The patient was operated with improvement of the motor deficit.

Histological examination confirmed the diagnosis of benign neurinoma

Extradural schwannomas can be distinguished from other nerve sheath tumors growing inside the spinal canal by their clinicoradiological features and unlikely nerve root origin.

After surgery, recovery from pyramidal tract deficits, even severe, is noteworthy; in the authors' experience, however, resection of an involved appendicular root is more likely to result in a permanent and significant radicular deficit.

### **P14- Spinal Arteriovenous Fistula a case report**

*Firdews Zulfa Benamara, Bennabi W, Benhafri A, Djaafer M.*

*Department of Neurosurgery , Mustapha Pacha Hospital*

#### **Abstract :**

Spinal dural arteriovenous fistulas (AVFs) have been categorized on the basis of the Anson and Spetzler classification into 4 types. Type I is the most common type and

describes an abnormal connection between a radicular artery at the nerve root sleeve and an intradural draining vein. This communication results in progressive dilatation and mass effect from the draining vein experiencing arterial pressures without intervening arterioles. In this patient, preoperative angiography showed a type I dural AVF. A laminoplasty was performed to provide dural exposure, and a midline durotomy was performed. Indocyanine green (ICG) angiography was used to visualize flow within the fistula. This dorsal dural AVF demonstrated the characteristic slow venous flow. Pressure recordings were obtained and confirmed the elevated venous pressure observed in these lesions. Bipolar coagulation of the fistulous point was performed, and the vessel was removed at the site of the root entry zone to permit pathologic confirmation of the arteriovenous interface. Intraoperative ICG angiography findings confirmed disconnection. The patient gave informed consent for surgery and video recording

### **P15- Plug screw fall off : A Case Report of Rare Complication of Minimal Invasive Surgery (MIS) in Spinal Trauma**

Wadia Montasar, F.Boussadoun, Lahssini.W,bassalah.E, Ben jaafer.S, H.Makhlouf, MA Bennour

*Bizerta university hospital, orthopedic surgery department*

#### **Abstract :**

Introduction : Percutaneous pedicle screw fixation has been a popular approach for treating thoracolumbar fracture, and its relevant complications have been gradually recognized.

Case report: A 45-year-old patient presented to us with complaints of severe pain in back following a fall from 4 meters height .

She was diagnosed with L1 burst fracture and was managed by indirect fracture reduction and posterior instrumented stabilization from D11 to L3 by MIS . She presented to us with complaints of pain over back after 6 months of index surgery. Neurology was intact, and quantitative CRPH was normal. X-ray showed plug screw fall off with pedicle screws in situ. Patient was planned for removal of implant.

Conclusion: Mechanical complications associated with implants should be always kept in mind while planning the surgery Careful selection of patients and implants with proper technique of MIS in spine will be advantageous than open surgeries.



### **P16- Acute Subdural Hematoma after Spinal Anesthesia**

*Omayma Saadi, DR Meriem Derguini., PR Hichem Mkhouloufi*

*Departement of Neurourgery CHU Constantine Algeria*

#### **Abstract :**

Introduction :the Acute Subdural Hematoma is an exceptional complication following a dural breach after an epidural analgesia by leakage of spinal fluid "CSF" its incidence after spinal anesthesia remains underterminated. Observation: We report a case of extremely rare acute subdural hematoma of a 26 years old G1P1 female with no particular pathological history presenting headaches of progressive intensity after an emergency caesarean section at 39 WA for fetal dystocia. On postoperative D2, the patient presented an altered state of consciousness and anisocoria. The cerebral CT scan revealed the existence of an acute left hemispheric subdural hematoma of 18 mm of thickness, with subfalcine herniation; this clinical picture needed a craniotomy with drainage of the hematoma. the postoperative follow-up was marked by the appearance of an ischemic stroke in the territory of the posterior cerebral artery objectified on postoperative D14 , with positive evolution. Discussion :The incidence of accidental dural puncture during epidural anesthesia is between 0.26 and 2.6% .In our observation the headache is persistent with the rapid onset of neurological signs, cerebral computed tomography has been urgently indicated and confirmed the diagnosis of SDH. Conclusion :In front of the persistence of post-spinal anesthesia headaches , even in the absence of neurological signs, the subdural hematoma must be mentioned, cerebral CT is sufficient to confirm the diagnosis in an emergency.

### **P17- Solitary Spinal Osteochondroma : Two case reports and literature review**

*Maila Bounemra, Ben Fradj R., Chabaane M., Ben Messaoud M., Mlaiki A., Ksira I.*

*Department of Neurosurgery of the University Hospital Center of Sahloul Sousse*

#### **Abstract :**

Osteochondromas, also known as exostoses, are common benign tumors of long bones, originating from cartilage, that rarely involve the spine. They may produce a wide variety of symptoms and complications depending on their spinal location. We describe a first case of an 18 years old patient presenting a slowly growing neck mass without any neurological deficit. The diagnosis of an osteochondroma originating from the posterior arch of C4 and C5 was made. We report a second case of a 62 years old



patient with gait disturbance due to a thoracic osteochondroma, originating from the D4 vertebra with intraspinal extension and spinal cord compression. The two patients underwent surgery and a complete tumour excision was done in both cases. Postoperatively the patients' symptoms were improved.

### **P18- Intradural disc herniation at causing Cauda Equina Syndrome**

*Maila Bounemra, Chabaane M., Ben Messaoud M., Ben Fradj R., Ksira I.*

*Department of Neurosurgery of the University Hospital Center of Sahloul Sousse*

#### **Abstract :**

Intradural disc herniation corresponds to the herniation of a fragment disc into the thecal sac or into the nerve root sleeve. It is an uncommon presentation of a relatively frequent pathology with a reported incidence of 1% of all lumbar disc hernias. It is difficult to make a definite diagnosis preoperatively, despite the availability of various radiological imaging tools. We report a case of a 50 years old man who presented with bilateral sciatica followed by an acute onset of decreased muscle strength of both legs and urinary incontinence. MRI showed a voluminous L3-L4 disc herniation occupying great portion of the vertebral canal. The surgery was indicated and the hernia was removed with a transdural approach. Post-operatively the patient presented a complete pain relief with persistence of the motor deficit and sphincter disorders. The current case demonstrates that for intradural disc herniations the diagnosis is mainly intraoperative, and the surgical technique has some special aspects.

### **P19-Retroperitoneal schwannoma: about a case and review of the literature**

*KHADIDJA YOUBI, TAKBOU I.-BEKRALAS H.*

*Departement of Neurosurgery CHU BEJAIA*

#### **Abstract :**

Introduction :

Retroperitoneal schwannomas are benign tumors that originate in the neural sheath of peripheral nerves. The retroperitoneal localization is rare estimated at 03% and more frequent in men. Preoperative diagnosis is quite difficult in the absence of specific signs and radiological imaging features.

Material and method :

-We report the case of a 43-year-old patient presenting with slow spinal cord compression syndrome evolving for 01 year.

- Imaging revealed a voluminous paraspinal ovoid formation of 11 cm at the height of the extra-foraminal root sheaths of right L1-L2-L3 in favor of a Schwannoma.
- We operated on the patient through the trans-abdominal route; in per-op the mass pushed back the inferior vena cava, the ureter and the posas muscle as well as the roots of L1-L3. We carried out a total resection of the lesion in complete safety.
- In post-op the patient presented numbness of the right thigh put under adequate treatment and could be discharged without incident on the fifth post-operative day.

Discussion :

- Retroperitoneal schwannoma is a benign and rare tumor representing, depending on the series, 0.5 to 1.2% of retroperitoneal tumors.

- Clinical diagnosis may be late due to clinical polymorphism

MRI remains the examination of choice in radiological diagnosis.

The ideal treatment is total surgical excision of the mass.

Conclusion: Retroperitoneal schwannoma is a benign tumor. Management is surgical and multidisciplinary.

### **P20- Cervical myelopathy**

*Lynda Atroune, Kamel Bouaita, Soumia Benallag, Nawel Habchi, Miloud Djafer  
Neurosurgery Departement, Mustapha Bacha University hospital*

#### **Abstract :**

Introduction : Cervical myelopathy is a progressive cervical spinal cord disorder associated with narrowing of the dimensions of the cervical canal due to osteoarthritis. The pathophysiology of spinal cord injury in the context of narrow cervical canal is poorly understood.

Materiel and methods: We retrospectively collected data from all patients diagnosed and treated for cervical myelopathy in our Neurosurgery Department at Mustapha Bacha Hospital.

Results: 64 patients were diagnosed with CM. Neck pain was the main symptom in all our patients, whether or not accompanied by paresthesia or weakness of the 04 limbs. Followed by sensory disturbances, motor disturbances and sphincter disturbances. All our patients have benefited from surgical treatment, associated with medical (analgesic) and orthopedic (immobilization) treatment, the results demonstrate an improvement in the clinical condition in most patients.

Conclusion : The devolution mode in the CM is progressive, on an intermittent mode. Spontaneous resolution is very rare. The result of conservative treatments is a little



disappointing and the chances of recovery are very low in the absence of surgical treatment.

**P21- Surgical decompression of spinal lymphangiomatosis : indication and**

**outcomes** *Benbelgacem Amal, Maatoug A, Abdelhedi A, Barneoui I, Raddeoui W, Boudawara MZ Neurosurgery department, CHU H. Bourguiba , Sfax*

**Abstract :**

OBJECTIVES: To report two cases of lymphangiomatosis of the spine requiring surgical intervention and a review to the literature.

SUMMARY OF BACKGROUND INFORMATION. Lymphangiomatosis is a rare childhood disease characterized by abnormal lymph tissue at multiple sites. Skeletal and visceral involvement are both common. Prognosis depends on the extent of extraskkeletal disease.

METHODS: Two cases of lymphangiomatosis causing neural compression and instability at the cervicothoracic junction are presented. Both patients underwent surgical decompression.

A rare case of solitary intraspinal epidural lymphangioma is described with a review of the literature. A 16-year-old boy was admitted with a history of two-year of progressive paraparesis. Magnetic resonance imaging study revealed a 2 × 2 × 6 cm sized epidural cystic mass in the thoracic spine. Surgical total removal and biopsy were performed. The final pathologic report on the mass indicated lymphangioma.

RESULTS: One patient died, whereas the other regained full function and activity.

CONCLUSIONS: Surgery is indicated when lymphangiomatosis causes neural compression and instability of the spine. Surgical outcome is strongly influenced by extraskkeletal involvement.

**P22- Intramedullary spinal neuroenteric cyst: case report and review of the**

**literature** *Khansa Abderrahmen, Alaa Belhaj, Firas Sliti, Sofien Bouali, Imed Ben Said, Jalel Kallel Neurosurgery department, - Institut of Neurology Tunis*

**Abstract :**

Neuroenteric cysts are rare congenital malformations of the central nervous system that occur during early embryogenesis and enter as part of notochordodysraphies. These lesions may develop anywhere along the neural tube however, they are most commonly encountered in the intradural extra medullary space of the lower cervical and upper thoracic segments of spine. Herein we report a case, diagnosed and operated in



the department of neurosurgery at the national institute of neurology of Tunis, of a 59-year-old woman, who had suffered from progressive symptoms of spinal cord compression. An MRI imaging study of the spine demonstrated an intramedullary cystic mass at T9 level hypo signal on T1 WI and hyper signal on T2 WI with no contrast enhancement after gadolinium injection. The patient underwent surgery; two level laminectomy, dural incision and midline myelotomy with evacuation of the cyst's content and a near complete removal of the cyst wall with an uneventful post-operative course. Histopathological examination confirmed the positive diagnosis of a neuroenteric cyst. In this case, the uncommon intramedullary site and the absence of bony abnormalities made the preoperative diagnosis of a neuroenteric cyst not evoked however; this entity should be included in the differential diagnosis of spinal cystic lesions.

### **P23- Butterfly Vertebrae: A Case Report**

*Abdel Ileh C., Kammoun H., Haj Taie A., Boukhit M., Hadhri M., Ben Ncir A., Maamri K., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

**Background:** A butterfly vertebra is a vertebra with a midline sagittal cleft due to failure of fusion of the lateral halves of the vertebral body. It is a rare congenital anomaly. The first description of this phenomenon was by Rokitansky in 1844.

**Method:** A 46-year-old woman presented to our outpatient clinic with 2-year history of mid back pain. The patient's medical history was unremarkable and she reported occasional back pain since early adolescence. Symptoms were worst in the morning and get better with movement during the day. No other symptoms were reported in the low back, buttocks, or legs. She had an increased thoracic kyphosis without lateral trunk shift. Routine examination of the motor and sensory system was normal. She had no paraesthesia, anaesthesia, cord, or cauda equina symptoms.

**Results:** MRI of the spine showed an anterior deficiency at the level of thoracic T7 vertebrae causing a wedge shape and a focal kyphosis. The two halves were asymmetric, with an intact posterior arch and pedicles. Radiologic investigations confirmed presence of butterfly vertebra at T7 level with no posterior disc protrusion.

The patient was informed of the benign nature of her vertebral anomaly. She improved remarkably with analgesics and physiotherapy.

Conclusion: "Butterfly" vertebra is a rare congenital anomaly, presenting as a sagittal cleft in the vertebral body. This uncommon deformity is described as an isolated finding but can be part of various syndromes, such as Al

### **P24- Spinal Cord Compression Revealing Primary B-Cell Lymphoma of L2 In A 24-Year-Old Young Woman.**

*El Mir A., Kammoun H., Haj Taieb M., Trifa A., El Kahla G., Maamri K., Darmoul M.*

*Department of Neurosurgery &#8211; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

Background: Primary spinal localization of large B-cell lymphoma is rare. In fact, vertebral involvement generally occurs at a very advanced stage of the disease in its systemic form.

Method: We report a rare case of a 24-year-old woman who was admitted in February 2022 with spinal cord compression that had been evolving for two months at the stage of paraplegia. The radiological assessment concluded to a lytic tumor process of L2 with displacement of the posterior wall.

A two-stage surgical intervention was decided. The first part consisted of an emergency decompression via a laminectomy, quickly followed by a lateral approach to the L2 vertebral body via a left lombotomy.

Results: The histological study rendered the diagnosis of diffuse large B-cell lymphoma and the patient's clinical recovery was remarkable under an intensive clinical rehabilitation program. The tumor extension investigation was negative. Adjuvant chemotherapy was administered and the patient was symptom free at the most recent check-up examination, 8 months after surgery.

Conclusion: Non-Hodgkin's lymphomas are an uncommon cause of spinal cord compression and their clinical and radiological presentations are not specific. Decompressive and ideally radical surgical removal remain the cornerstone of the treatment despite the chemosensitivity of these lesions



### **P25- Spinal Tuberculosis: Our Experience**

*El Mir A., Kammoun H., Boukhit M., Trifa A., El Kahla G., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

Background: Tuberculosis (TB) remains a major health problem in low income countries. Spinal column is involved in less than 1% of all cases of TB. It can be associated with neurological deficit and significant spinal deformity. Early diagnosis and management of spinal TB are key to prevent serious complications.

Method: We performed a retrospective study of patients with spinal tuberculosis treated in the department of neurosurgery in Fattouma Bourguiba University Hospital? Monastir, Tunisia, between 2016 and 2021.

Results: A total of 8 patients were included. They were 3 males and 5 females. Age at admission ranged from 39 to 57 years (mean 46.25). The average time to diagnosis from symptom onset was 7.7 months. Local pain was the most common symptom (37.5%), followed by sciatica (25%) and heaviness in the lower limbs (25%). The lesions were located in cervical (1 case), thoracic (3 cases), lumbar (2 cases), sacral (1 case), lumbosacral (1 case) and thoracolumbar junction (1 case) regions. All patients underwent surgery. A posterior approach was performed in 7 cases (87.5%). Significant symptom resolution was noted in 6 patients and stabilization in 2 patients.

Conclusion: Despite early diagnosis and effective management, spinal TB is still a major health problem in developing countries. Surgery in spinal TB is directed toward achieving adequate decompression and reinforcement of stability.

### **P26- Spinal Dural Arteriovenous Fistulas: About Five Cases**

*El Mir A., Kammoun H., Boukhit M., El Kahla G., Trifa A., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

Background: Spinal dural arteriovenous fistulas (SDAVF) with perimedullary venous drainage are rare but represent the most common of spinal vascular malformations. If the clinical presentation of these fistulas and the data of the paraclinical examinations are currently well known, it is not the same for the therapeutic choice. This work aims to make a contribution based on our experience and a review of the literature.



**Method:** This is a retrospective study of 5 observations of SDAVF treated at the department of neurological surgery of the Tunisian National Institute of neurology between 2001 and 2020.

**Results:** The clinical presentation was dominated by the signs of spinal cord compression. The positive diagnosis was made by spinal angiography. Two patients experienced complete endovascular embolization and three were treated surgically including two after failure of embolization.

At the end of the follow-up period neurological stabilization was obtained in two patients and three patients remarkably improved.

**Conclusion:** Spinal dural arteriovenous fistulas are associated with significant neurological morbidity mainly due to diagnostic delay. In case of impossibility to obtain a complete occlusion by endovascular route, surgical treatment should be prompted to avoid further neurological deterioration.

### **P27- Recurrence of A Purely Dorsal Extradural Meningioma Simulating a Metastasis: Case Report.**

*Abdel Ileh C., Kammoun H., Boukhit M., El oui E., Trifa A., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

**Background:** Spinal extra-dural meningiomas are rare and more frequently encountered at the dorsal level, more aggressive than purely intra-dural counterparts

**Method:** A 70-year-old man, presented with signs of spinal cord compression for the past two weeks. MR imaging showed a lesion strongly suggestive of metastatic epiduritis at the T5 level. The patient underwent a laminectomy with subtotal resection of a purely extradural moderately hemorrhagic mass.

**Results:** The anatomopathological study rendered the diagnosis of a WHO grade II meningioma. Patient's post-operative course was uneventful with a remarkable motor recovery.

**Conclusions:** Spinal extradural meningiomas can mimic metastasis and must be included in the differential in case of high contrast enhancement. Particular attention must be paid to such a pre- and per-operative mistake, which can be associated with important consequences.

**P28- Retro-odontoid pseudotumor (pannus) with Forestier's disease presenting with severe tetraparesis: A case report and literature review**

*Mohamed Boukhit, Farhat S., Abdel Ileh C., Hadhri M., El Kahla G., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

**Abstract :**

Background: The retro-odontoid pseudotumor or pannus is often associated with inflammatory diseases. It is typically located between the dens and the anterior arch of the atlas. Only a few cases have reported an association between retro-odontoid pannus, craniocervical chronic instability, and Forestier's disease.

Methods: We report the case of a 65-year-old male who presented with impaired ambulation and neck pain following minor trauma. Detailed neurologic exam showed weakness in all four limbs, with hypoglossal nerve palsy, dysphagia, and bladder dysfunction. The CT and MR studies showed cervical ankylosis with a retro-odontoid pannus and craniocervical stenosis with myelopathy associated with diffuse idiopathic skeletal hyperostosis.

Results: The patient underwent an urgent occipitocervical fixation with occipital craniotomy and C1 laminectomy. The postoperative course was uneventful and the neurological symptoms improved rapidly with the normalization of strength in four limbs. Within 2 weeks, he was able to walk independently. Postoperative imaging showed excellent craniocervical decompression with pannus regression and adequate fusion.

Conclusion: Retro-odontoid pseudotumor associated with Forestier's disease is a rare condition and may lead to cervicomedullary compression or myelopathy. To date, transoral spinal cord decompression followed by posterior stabilization has been a widely accepted treatment.

**P29- Bilateral pedicle fractures of the lumbar spine: A case report and literature review**

*Mohamed Boukhit, Boudabbous W., Haj Taieb M., Maamri K., El Kahla G., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

**Abstract :**

Background: Bilateral pedicle fractures are rare. These fractures might occur due to severe trauma, conditions with repetitive stress, osteoporosis, tumors, or unilateral spondylolysis.



**Method:** We present the clinical case of a 61-year-old mason with a story of lumbar trauma following a fall from 3 meters high with reception on the back. At the time of presentation, he complained of exacerbating low-back pain and intermittent L4 radicular pain on the right side. Radiological investigations revealed an acute bilateral pedicle fracture of L4. Laminectomy, reduction and direct trans-pedicular screw fixation were performed.

**Results:** Postoperative recovery was uneventful. The patient reported rapid pain relief and did not show any sensorimotor deficits at discharge.

**Conclusion:** Pedicle fractures are among the least common, those involving bilateral pedicles are rare. Few cases have been reported in literature. This pattern of injury mimic spondylolysis and is responsible most often for spinal instability requiring spinal stabilization surgery with or without decompression of nerve structures.

### **P30- Malignant Transformation of A Dorsal Schwannoma**

*Mohamed boukhit, Kammoun H., Haj Taieb M., El Kahla G., Hadhri M., Ben Ncir A., Maamri K., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

**Background:** Schwannomas represent 30% of spinal tumors, typically located intradurally and very rarely undergo malignant transformation.

**Method:** We report the case of a 31-year-old patient, who presented with a slow spinal cord compression evolving for 4 months with spastic paraparesis on examination, and a D7 sensory level. Imaging showed an intra-dural tumor lesion next to D7 with intra-canal extension and spinal cord compression. Subtotal tumor resection was performed via a posterior approach. The histology concluded to a benign schwannoma.

**Results:** The patient was readmitted 4 months later for neurological deterioration related to tumor recurrence, reaching the two vertebral bodies of D7 and D8. The histological examination confirmed the malignant transformation of the tumor and the extension assessment objectified mediastinal and pulmonary metastases. The patient received adjuvant radiotherapy without significant clinical improvement. He died a year later in an array of acute respiratory failure.

**Conclusions:** Benign spinal schwannomas with malignant transformation are exceptional. The diagnosis should be raised in the setting of an abnormal tumor growth



and an more aggressive biological behavior. The prognosis remains poor in the majority of cases despite multimodal treatment.

### **P31- Vertebral dysgerminoma: A rare case report and literature review**

*Mohamed Amin Haj Taieb, Elouni E, Elmir A, Farhat S, Trifa A, Ben Ncir A, Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

Background: Vertebral primary malignant germ cell tumors are rarely located in thoracic spine and are mainly represented by dysgerminomas.

Method: A 35-year-old male with Down syndrome, presented with lower extremity weakness and numbness of legs. An urgent spine MRI revealed a tumor-like vertebral collapse in D8, with infiltration of the peri-vertebral soft tissues responsible for severe spinal cord compression. Tumor was found to be extramedullary with histopathology consistent of germ cell tumor, dysgerminoma type.

Results: Immediate postoperative period was marked by the regression of motor deficit and the patient was addressed to undergo chemotherapy and local radiotherapy.

Conclusion: Primary germ cell tumors involving the spinal cord are very rare and that too extramedullary. Various management and treatment protocols are available. We recommend adequate decompression of cord with biopsy followed by local radiation and chemotherapy.

### **P32- Epidural spinal cord metastases from Undifferentiated Nasopharyngeal Carcinoma: A case report.**

*Asma Elmir, Farhat S., Abdel Ileh C., Boudabbous W., Trifa A., Hadhri M., Ben Ncir A., Darmoul M.*

*Department of Neurosurgery ; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

Background: Nasopharyngeal carcinoma (NPC) with metastasis to the central nervous system (CNS) is considered to be quite rare (3,3%). Metastatic to the spinal cord constitutes only 8.5% of all CNS metastases with the most common source is from lung. The pathologic mechanisms is due to hematogeneous spread, meningeal carcinomatosis, and direct invasion by malignant neoplasm.

**Method:** We report the case of A 47 years old man suffered from pain in back region and weakness in both leg progressively with history of cervical lymphadenopathy. Patient had neurological deterioration (Motor power is 0/5 from L2 level and decreased sensation 1/2 from T11 level). MRI showed epidural mass at T9-T10 level.

The patient underwent tumor excision. The patient had been informed about the treatment and outcome. The surgery was performed through posterior midline approach to exposed thoracic vertebrae. Laminectomy was done at level T8-T11 to reach the mass

**Result:** The histopathology result showed undifferentiated carcinoma which confirmed as metastatic from NPC

**Conclusion:** Intramedullary spinal cord metastatic of NPC is a rare case. The pathologic mechanisms of ISCM is due to hematogeneous spread, meningeal carcinomatosis, and direct invasion by malignant neoplasm. In this case, surgery aims at decompression of functional neural tissue, relieve pain, improve quality of life and histological confirmation of tumor.

### **P33- A rare Association of a Lumbar Meningocele and a Tailgut Cyst**

*Asma Elmir, Farhat S., Elouni E., Boudabbous W., Trifa A., Ben Ncir A., Darmoul M. Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

**Background:** Tailgut cysts are rare developmental cysts arising from remnants of the embryological postnatal gut. Despite being frequently located in the presacral space, isolated cases of aberrant locations have been reported, including, perirenal, perianal, and subcutaneous sites.

**Method:** A 15-month-old infant presenting with two masses at the level of the lumbosacral spine. The masses are well circumscribed, have a smooth surface, covered by normal skin, not pulsatile, and slip under the palpating finger. Whole-spine MRI revealed an open spinal dysraphism combining lumbosacral myelomeningocele, Diastematomyelia and lumbosacral intradural cystic lesion located at level exhibiting hyperintensity on T2-weighted images not enhancing when contrast was administered.

**Results:** A surgery to repair the defect and cyst excision was performed, and pathological analysis confirmed the diagnosis of tailgut cyst.



Conclusions: The anatomical position and rarity of the tailgut cyst led to difficulty firstly in diagnosis and secondly in surgical.

**P34- Extended Cervical Pneumorrhachis Due to Closed Head Injury: Report of Two Cases and Review of The Literature.**

*Emna Elouni, Farhat S, Elmir A., Abdelilleh C, Hadhri M, Trifa A, Maamri K, Darmoul M. Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

**Abstract :**

Introduction: Pneumorrhachis (PR) is defined by the presence of air in the spinal canal. Rarely reported, it can be secondary to degenerative, infectious, tumoral, or iatrogenic pathologies and is exceptionally caused by head trauma.

Material and Methods: We report two cases of polytrauma patients with PR and discuss the causes, mechanisms, and implications of this condition. Furthermore, a literature review was carried out.

Results: PR is considered a marker of severity and its presence should alarm the attending physician to look for other associated lesions, particularly the possibility of a CSF leak, which may require intervention.

Conclusion: Pneumorrhachis is a rare entity and has a wide variety of etiologies. Rarely causing neurological symptoms, its presence is often diagnosed by CT, which is very effective in detecting PR and specifying its extent and starting point in order to discuss the adequate treatment.

**P35- Fracture dislocation of the cervical spine with gross displacement : Case report** *Ghorbel Mohamed, Ben Belgacem.A, Maatoug.A, Abdelhedi.A, Boudawara.M.Z Neurosurgery departement of Habib Bourguiba Hospital, Sfax*

**Abstract :**

Fracture dislocation of the cervical spine is a common injury that often causes weakness in the arms and legs (quadriplegia). When the bones in the neck (cervical vertebrae) are severely out of place (displaced), it is often associated with severe neurological problems. Treatment for this injury typically involves realigning the dislocated bones and stabilizing the fractured vertebrae to ensure the stability of the spine.



We herein report the case of a patient with marked bony displacement who was operated in our department.

### **P36- Rachischisis : A case report and review of literature**

*Ahmed Amine Daoued, Kolsi F., Ayadi K., Chérif I., Boudaouara M.Z.*

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

#### **Abstract :**

Rachischisis is a developmental birth defect involving the neural tube. This condition occurs in utero around the third or fourth week after conception when the posterior neuropore of the neural tube fails to close, and the undifferentiated neuroectoderm remains exposed. Anencephaly is often associated to this condition. Fetuses having the malformation spontaneously abort and when pregnancy is carried on infants have high mortality rates. Ultrasonography can suspect the anomaly and fetal MRI is performed to confirm the diagnosis. Medical termination of the pregnancy is proposed to the parents after diagnosis.

Herein, we report the case of a full-term male infant who was born in our hospital. There was no parental consanguinity. The pregnancy was not monitored. The infant had a 16X6 cm red mass located in his back . He was paraplegic. Cerebrospinal fluid was leaking from the mass. The lesion was wrapped in sterile bandages. Nursing was performed daily. He developed meningitis the following day after birth. He was administered antibiotics. He died at the age of 15 days.

### **P37- Spinal nerve tumors: Neuroma or neurofibroma: is there a difference?**

*Ahmed Amine Daoued, Kolsi F, Abdelhedi A, Chérif I., Boudaouara M.Z.*

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

#### **Abstract :**

Plexiform neurofibromas are among the most common complications and more disabling neurofibromatosis type 1 (NF1). They are the origin of significant morbidity, including functional impairment, and may even endanger life. Plexiform neurofibromas are also susceptible to developing into a malignant peripheral nerve sheath tumor, a refractory complication to treatment. The differential diagnosis of a neuroma is not easy, especially since the radiological aspect is not always evocative.

We herein report the case of a 72-year-old hypertensive patient who consulted for back pain evolving for 3 years, recently becoming resistant to analgesic treatments associated with intermittent spinal claudication limiting the walking distance to 100 meters. No vesico-sphincteral disorders or associated sensory disturbances were noted.

On examination, the patient had a reflex pyramidal syndrome in both lower limbs with mild paraparesis. Skin examination was without abnormalities. A spinal MRI was requested showing an intradural extramedullary expansive process next to D12. This oval lesion is in the T1 hypo signal, enhancing in the periphery after injection of Gadolinium, T2 hyper signal. The patient was operated on with the histological examination concluded to be a plexiform neurofibroma.

### **P38- Successful neurosurgical management of a Giant sacral chordoma via one stage posterior approach**

*Zohra SOUEI, Hadhri M, Boukhit M., Elouni E., Ben Ncir A. Darmoul M*

*Neurosurgery Departement at FATTOUMA BOURGUIBA UNIVERSITY HOSPITAL*

#### **Abstract :**

Chordoma is a relatively rare tumor that accounts for 1% to 4% of all malignant bone tumors. Although chordoma is aligned with the axis of the spine and most commonly develops in the sacrum, to the best of our knowledge, giant sacrococcygeal chordoma is extremely rare.

An 79-year-old man with history of controlled hypertension and benign prostatic hyperplasia was admitted to our neurosurgery department with a slow growing, very large hard mass of the sacral region which became easily palpable over the previous 2&#8201;months. He also suffered a chronic constipation. Based on the imaging findings, we suspected that the sacrococcygeal mass was a chordoma, The patient underwent a posterior approach extensive open surgery to achieve complete resection of the sacrococcygeal mass without any neurological deficit nor bladder or bowel-related complications, both S2 roots were preserved Postoperative pathological examination confirmed the diagnosis of a sacral chordoma. Re-surgery for postoperative CSF leakage was needed.

In this case, the reported technique allowed high sacral resection through S2-S3 by a posterior-only approach, with the intention of achieving radical removal. It is less



invasive with minimal morbidity. The major technical problems were the margins of excision in the sacrum itself and in the perirectal soft tissues, and the preservation of sacral nerve roots.

### **P39- A rare cause of non discal sciatica: Spinal Dural Arteriovenous Fistula**

*Imen-Dammak, Chérif I., Kolsi F., Kammoun TL., Boudawara MZ.*

*service de neurochirurgie hopital habib bourguiba de sfax*

#### **Abstract :**

Spinal dural arteriovenous fistulas (SDAVFs) are rare entities and are often misdiagnosed. Clinical symptoms are insidious, not specific and may progress slowly; usually patients present with slowly progressive paraparesis and urinary disturbances. Imaging diagnosis relies on MRI and conventional spinal angiography.

We present here a case of a 65-year-old male who presented to our department of Neurosurgery for paroxysmal lomosciatica with an S1 topography and urinary incontinence. The spinal magnetic resonance imaging revealed a dorso-lumbar dural arteriovenous fistulas with myelopathy. The patient was referred to the radiology department and the SDAVF was managed by embolization.

Clinicians should be aware of fluctuating symptoms in the early stages to avoid misdiagnosis of SDAVF which may result in a wrong plan of management and severe neurological disability. Once identified, the dural arteriovenous fistula should be immediately treated by either endovascular embolization or surgical ligation.

### **P40- Retrospective study of 54 cases of Cauda equina syndrome**

*Firas Sliti, Ben Massoud M., Nessib N, Abdelhafidh S, Kermani N., KALLEL j.*

*Neurosurgery departement of The National Institute of Neurology*

#### **Abstract :**

Introduction Cauda equina syndrome is a rare clinical entity which is secondary to the compression of the cauda equina roots. It is a diagnostic and therapeutic emergency. Materials and methods We performed a retrospective study of 54 cases of Cauda equina syndrome operated in emergency at our department. Results The average age of our patients was 45 years. The functional signs were dominated by genital-sphincter disorders (100% of cases). Our series included an incomplete form of cauda equina syndrome in 63% of the patients and a complete form in 37% of the cases. The

etiological origin was dominated by lumbar disc herniations, which were found in 87% of cases, followed by tumor causes in 13% of cases. Urgent surgical decompression was performed in all patients. The long-term evolution (2 years of follow-up) was stationary in 37% of the cases, favorable in 61.1% of the cases of which 33.3% had a complete recovery, with only one case of aggravation (1.9%). Our analytical study showed significantly a favorable evolution in the age group below 45 years. The incomplete form was significantly associated with a favorable evolutionary prognosis. A duration of evolution lower than 48 hours is associated with better prognosis. The presence of anaesthesia in the saddle is a statistically significant factor of poor prognosis. Conclusion Urgent surgical decompression within 48 hours of the onset of signs and the incomplete form are associated with a favorable evolution.

#### **P41- Intramedullary spinal cavernomas : a cohort of 7 patients**

*Benbelgacem Amal, Abdelhedi A, Maatoug A, Boudawara MZ Neurosurgery department, CHU H. Bourguiba , Sfax*

##### **Abstract :**

Introduction: Intramedullary spinal cavernoma (ISC) is a rare entity among spinal vascular pathologies.

Methods and Results: We performed a retrospective single-center study of 7 cases of ISC managed over the past 24 years in Sfax's neurosurgery department. It consists of five men and two women and whose age varies between 33 and 83 years (median age 54). The dominant symptomatology was motor disorders. The degree of disability varied between symptomatic pauci patients (28% ) and those who were severely affected. Medullary magnetic resonance imaging (MRI) carried the diagnosis by showing intramedullary lesions of heterogeneous signal. The location was cervical in 1 case, dorsal in 3 cases and lumbar (terminal cone) in 3 cases. Surgical excision was performed in five cases. On long-term follow-up after treatment; partial recovery was obtained 80% while stabilization was noted in 20%.

Conclusions: Improved neuroimaging techniques have led to an increase in the reported cases of intramedullary cavernomas. Postoperative neurological function is determined mainly by the preoperative neurological status.



**P42- Surgical decompression of spinal lymphangiomatosis : indication and**

**outcomes** *Benbelgacem Amal, Maatoug A, Abdelhedi A, Barneoui I, Raddeoui W, Boudawara MZ Neurosurgery department, CHU H. Bourguiba , Sfax*

**Abstract :**

Summary of Background Information: Lymphangioma is a benign lesion consisting of abnormal proliferation of lymphatic vessels. Lymphangiomatosis is a rare childhood disease characterized by abnormal lymph tissue at multiple sites. When skeletal and visceral involvement are both common, the prognosis depends on the extent of extraskkeletal disease.

Objectives: Two cases of lymphangiomatosis of the spine and one rare case of solitary intraspinal epidural lymphangioma requiring surgical intervention are presented : a literature review.

Methods and results: Two cases of lymphangiomatosis causing neural compression and instability at the cervicothoracic junction were presented. Both patients underwent surgical decompression. One patient died, whereas the other regained full function and activity. A 16-year-old boy was admitted with progressive paraparesis over two years. Magnetic resonance imaging study revealed an epidural cystic mass in the thoracic spine. Surgical total removal and biopsy were performed. The final pathologic report on the mass indicated a lymphangioma. Finally, the patient was able to walk and a medullary MRI showed complete relief of the mass effect.

Conclusions: Spinal lymphangiomas / lymphangimatosi are a rarely found pathology of the spinal canal. Surgery is indicated in case of neural compression and instability of the spine. Surgical outcome is strongly influenced by extraskkeletal involvement in lymphangiomatosis and incomplete resection of lymphangiomas

**P43- Atlantoaxial langerhans cell histiocytosis manifesting as painful torticollis:**

**Case report in a 6-year-old child**

*Firas Sliti, NESSIB N., ZAIRI M., BOUALI S., NESSIB N.*

*Orthopedic department of Bechir Hamza children's hospital*

**Abstract :**

Purpose: The aim of this work was to describe the management challenges of treating of a rare localization of langerhans cell histiocytosis in the craniocervical junction complicated by spinal instability and deformity. Methods: A 6-year-old child consulted for



painful torticollis evolving for two weeks. Patient has no medical and surgical history or cervical spine trauma. The clinical examination objectified a torticollis without neurosensory deficit. Cervical spine x-ray showed spinal deviation without bone lesions. Specialized examinations have been requested. Results: Cervical spine CT scan concluded in an atlantoaxial rotational dislocation with bone involvement of C1 and C2. The MRI objectified the presence of spinal cord compression at the CCJ and a soft-tissue mass between C1-C2. Bone scintigraphy showed two fixation locations. One at the cranio-cervical junction, the other at the level of the left iliac crest. Bone biopsy at the lesion of the iliac crest concluded in Langerhans cell histiocytosis. The biological explorations objectified a pancytopenia. The child had medical treatment such as corticosteroids and vinblastine. For bone lesions and instability of the cranio-cervical junction, two-stage surgery was performed. Stabilization of the skull by halo-vest. Then enlargement of foramen magnum, C1 laminectomy and non-instrumented occipito-C2 arthrodesis. At 3-years of follow-up, the cervical spine was stable without torticollis and the child is healed.

#### **P44- Dural arteriovenous fistulas and dysraphisms: a very rare association**

*Ahmed Amine Daoued, Kolsi F. Chérif I. Kammoun T. Boudaouara M.Z.*

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

#### **Abstract :**

Spinal vascular malformations are rare but significant disorders of the spine that are frequently categorized as congenital and acquired lesions. Although there is a well-established link between spinal arteriovenous malformations (AVM) and other congenital anomalies, dural arteriovenous fistulas (AVF) and tethered spinal cord are extremely uncommon; only ten cases have been documented. We herein report a rare case of a 42-year-old male from the neurosurgery department, of the "Habib Bourghiba" university hospital of Sfax, who presented with heaviness of both limbs. The MRI showed a dural arteriovenous fistula (AVF) associated with a tethered spinal cord. The patient was treated with embolization.

With a focus on potential difficulties in diagnosis and therapy, we present a recent review of the literature.



#### **P45- Intramedullary conus metastasis from carcinoma lung**

*Haifa Mechergui, Khalil GHEDIRA, Asma BOUHOULA, Firas SLITI, Sofiene BOUALI, Khansa ABDERRAHMEN, Jalel KALLEL*

*Neurosurgery, national institut of neurology , Tunis*

#### **Abstract :**

Intramedullary spinal cord metastasis (ISCM) is extremely rare. The literature search has yielded only six cases. In most cases metastasis are from lung cancer.

We report the case of a 62 year old man with the history of a lung adenocarcinoma treated since 2017 with pulmonary lobectomy followed by a chemotherapy. He underwent 2 brain metastasectomy in 2017 and in 2020. He presented with heaviness of both lower limbs without erectile or bladder dysfunction since 3 months. The patient has never presented radiculopathy or myeloradiculopathy. At the time of presentation he had a paraplegia predominant on the right side with a sensory level at 11th dorsal vertebral level (D11). The reflexes are present without Babinski sign. The medullary MRI showed an homogenously mass within the conus at the D12 level to L1 predominant in the right side. A D12, L1, L2 laminectomy was done allowing to objectify an oval shaped lesion invading the conus medullaris with a fibrous consistency. A large biopsy was performed. After the surgery the patient presented a slight improvement in motor deficit distally with proximal worsening.

The underlying pathophysiology of ISCM remains ambiguous. The most probable route of tumor spread include: Hematogenous seeding or leptomeningeal invasion. It could be the first presentation of the cancer. The prognosis for these metastasis is generally poor. When the patients' general condition is good, surgery can relieve pain and preserve or stabilize neurologic function.

#### **P46- Medullary compression by extramedullary hematopoiesis in beta-thalassemia: A case report and review of the literature**

*Haifa Mechergui, Khalil GHEDIRA, Aziz HERMASSI, Siwar FARHAT, Sofiene BOUALI, Khansa ABDERRAHMEN, Jalel KALLEL*

*Neurosurgery, national institut of neurology , Tunis*

#### **Abstract :**

Extramedullary hematopoiesis is a compensatory physiological phenomenon that occurs during chronic anemias. It is seen in the intermediate forms of beta-thalassemia.

In rare cases, it may be located within the vertebral canal and may be the cause of bone marrow compression.

We report the observation of two patients, one 33 years old and the other 21 years old, both known to have beta-thalassemia intermedia, who were admitted to our department with a dorsal spinal cord compression. Spinal cord imaging revealed in both patients an extra-dural, multilevel, intra-canal mass compressing the posterior aspect of the dorsal medulla. Both patients were transfused and operated with complete removal of the lesion.

Anatomopathological examination concluded that both patients had an ectopic focus of hematopoiesis.

Bone marrow compression by ectopic focus of hematopoiesis in beta thalassemia is a rare entity, which is mostly seen in young males. It is the result of a compensatory process of a well-tolerated chronic anemia. The clinical examination easily allows to suspect the diagnosis. Magnetic resonance imaging is the best diagnostic test. Surgical decompression is necessary in some cases.

#### **P47- Thoracic spinal chordoma mimicking a schwannoma**

*Haifa Mechergui, Khalil GHEDIRA, Slimane ABDELHAFIDH, Siwar FARHAT, Sofiene Bouali, Khansa ABDERRAHMEN , Jalel KALLEL  
Neurosurgery, national institut of neurology, Tunis*

#### **Abstract :**

Chordomas are slow growing, malignant and aggressive neoplasms originating from notochordal remnants. Although they are typically found in the sacrococcygeal (50%) followed by the sphenoid-occipital (40%) regions, spinal chordomas (15%) and more often found in the cervical spine. Here, we present a 62 year old male with a dumbbell-shaped T3/T4 chordoma who first underwent biopsy followed by definitive transthoracic resection of his tumor. The relevant literature was additionally reviewed.

#### **P48-Spinal neurenteric cyst : a case report**

*Rachdi Mohamed Amine, Mohamed Dehmani Yedeas, Masmoudi Mourad, El Afif sinda, Achoura Sameh, Ammar Hichem, Chkili Ridha.  
Neurosurgery department, Military Hospital of Tunis*

#### **Abstract :**

Introduction



The neurenteric cyst is a rare congenital deformity, due to the abnormal persistence of an accessory neuroenteric duct. It is usually intradural extra-medullary, with predilection for the lower cervical and upper dorsal region. We, hereby, present an uncommon case of intradural intramedullary spinal neurenteric cyst.

#### Case presentation

An 11-year-old child presented with neck pain and gait problems evolving for six months. Magnetic resonance imaging (MRI) was performed and showed intradural and intramedullary cystic formation at the level of C5-C6, isointense to cerebrospinal fluid (CSF) with non-enhanced wall. The mass was removed surgically.

Histological examination showed a very thin cystic wall with a columnar ciliated coating with numeral mucin-producing cells. The epithelial cells had monomorphic nuclei without atypia. Reactive gliosis was noted in the adjacent glial parenchyma. These findings were consistent with a spinal neurenteric cyst.

#### Conclusion

The neurenteric cyst is a rare congenital anomaly of the medullary canal. There are no specific clinical signs. The size of the cyst and the associated malformations affect the onset of symptoms. The diagnosis is suggested by MRI and confirmed by an anatomopathological study of the cyst wall. Surgery is intended to be as radical as possible to avoid relapse

### **P49- Tarlov's radicular cyst : an unusual cause of low back pain**

*Rachdi Mohamed Amine, Mohamed Dehmani Yedeas, Masmoudi Mourad, Fakhfakh Chaden, Radhouen Khaled, Ammar Hichem, Chkili Ridha.*

*Neurosurgery department, Military Hospital of Tunis*

#### **Abstract :**

##### Introduction :

Peri-radicular cysts or Tarlov's cysts are nerve root cysts formed by cerebrospinal fluid-filled pockets, most commonly found at the sacral level of the spine, or in other sections of the spine, which can result in progressively painful radiculopathy.

##### Case report :

We report the case of a patient admitted to our department for right L2 low back pain, with no notion of associated vesicosphincter disorders or radicular claudication. A lumbar MRI showed a peri-radicular cystic formation in the L1-L2 foramen of conjugation, suggesting a Tarlov cyst. Surgical excision allowed resolution of the clinical symptoms.

Conclusion:

Tarlov cyst is an important clinical entity to be aware of, mainly because of its asymptomatic clinical presentation and its tendency to increase in volume over time. It may be a rare cause of lumbar radiculalgia and should be considered in the differential diagnosis of these pains.

**P50-An intracranial hypertension syndrome revealing a cauda equina tumor**

*Rachdi Mohamed Amine, Mohamed Dehmani Yedeas, Barnaoui Imen, Achoura Sameh, Ammar Hichem, Chkili Ridha.*

*Neurosurgery department, Military Hospital of Tunis*

**Abstract :**

Hydrocephalus associated with a medullary cone and/or horsetail tumour is extremely rare. We present the case of a 47-year-old patient, with no previous pathological history, who was hospitalised with an intracranial hypertension syndrome secondary to active quadriventricular hydrocephalus. This necessitated the use of a ventriculoperitoneal shunt. Intraoperatively, the cerebrospinal fluid was xanthochromic and the cytochemical study revealed hyperproteinorachy. As part of the etiological assessment of this hyperproteinorachia, the thoraco-abdomino-pelvic CT scan showed a lumbar intra dural expansive process opposite L2 - L3. A complementary lumbar MRI confirmed the presence of an intradural solid-cystic formation at this level. The patient had a complete surgical removal of the intradural lesion and the anatomopathological study concluded to a Schwannoma.

**P51- Percutaneous osteosynthesis of thoraco lumbar fractures: a scannographic evaluation**

*Wadia Montasar, Bousadoun.F, Lahssini.W, H.Makhlouf,Bassalah.E,Ben jaafer.S ,MA Bennour*

*Bizerta university hospital, orthopedic surgery department*

Background:

Percutaneous fixation represents a turning point in the management of traumatic thoraco lumbar spine fractures. The objective of our study were to evaluate radiological results during percutaneous fixation of thoraco-lumbar fracture.

Methods:

Retrospective descriptive review of a series of 30 patients with thoracic and lumbar fractures treated with percutaneous minimally invasive surgery over a period of 2.5 years. We evaluated the radiological parameters: lesion level, local kyphotic angle





(LKA), Cobb's angle , a classification of the AO, posterior wall retreat, and the accuracy of pedicle screw placement through postoperative CT.

**Results:**

The lesion was located at the thoracolumbar junction in 73.34% with 70% classified as A3. The average preoperative LKA was 12.1. This was 5.45° in the immediate postoperative period. The average preoperative Cobb's angle was 18.42°. This was 12.66° in the immediate postoperative period. In total 186 pedicle screws were inserted by 3 different surgeons. In 50%, there was a spinal canal invasion with a mean posterior wall hindsight of 36.33%. According to the classification of Rao et al. misplacement was found in 38.7% and in 11.29% there were non-minor perforations (grade 2 and 3).

**Conclusion:**

Percutaneous fixation is a reliable method with a low complication rate but with a technically demanding procedure.

## **CEREBRAL ONCOLOGY**

### **P52- False Localizing Sign: Kernohan's Syndrome Due to Left Parietal**

**Meningioma** *Zakia Ganoun, Anis Kraoune, Farid Bouchenaki*

*EHS ALI AIT IDIR ALGER ALGERIE*

#### **Abstract :**

The Kernohan syndrome results from the compression of the cerebral peduncle against the tentorium cerebelli. This phenomenon represents a relevant clinical sign of trans-tentorial herniation due to an ipsilateral expansive lesion.

We reported a case of a 44 years old man with a Left parietal meningioma who developed a false localizing hemiparesis, which has been improved after surgical resection.

This case emphasizes the mechanism and rarity of this pathology

### **P53- Cerebellopontine angle ependymoma in a child: A case report**

*Naceur Mariem, Slimane A, Nessib N, Ghedira K, Kermani N, Kallel J.*

*Nerosurgery departement, National Institute of neurology Tunis*

#### **Abstract :**

Infratentorial ependymomas that arise in the fourth ventricle and extend into the cerebellopontine angle (CPA) through the foramina of Luschka are well described. However, a primary CPA location of an ependymoma is distinctly uncommon.

We present the case of a 11 year-old-boy with no medical history. Who presented with headache, right-sided facial palsy, imbalance, double vision, and vomiting .An magnetic resonance imaging scan of the head showed a large mass lesion centered in the right cerebellopontine angle with heterogenous enhancement and hydrocephalus. The patient underwent microsurgical gross total resection of the tumor via a retrosigmoid approach. The histopathology was a grade II ependymoma. The patient tolerated the surgery well and his postoperative course was uneventful. He received radiation therapy.

Childhood CPA ependymomas are uncommon variants of ependymomas of posterior fossa originating from ependymal cell rests which are present in the foramen of Luschka and appear to arise from the lateral surface of brain stem.



Isolated extra-axial ependymomas at the cerebellopontine angle (CPA) are rare, particularly when no fourth ventricle involvement is identified. It has been suggested that deposition of heterotopic ependymal rests in surrounding tissue during fetal development could give rise to extra-axial ependymomas

Although rare, extra-axial CP angle ependymomas should be considered as a differential diagnosis to other lesions of the CPA.

#### **P54- Fronto-orbital paraganglioma**

*Nesrine Nessib, Ghedira K, Siti F, Slimane A, Mchergui H, Bouali S., Kallel J.*

*Departement of Neurosurgery National Institute Mongi Ben Hmida of neurology Tunis*

#### **Abstract :**

The paraganglioma is a typically benign neuroendocrine tumour derived from extra-adrenal paraganglia of neural crest origin. Its occurrence in the paraganglia-free central nervous system is uncommon and its orbital location is extremely rare. We report the case of a 29-year old woman, followed for a recurrent retroperitoneal paraganglioma with vertebral bone metastases, having received concomitant radiochemotherapy without obtaining control of the disease. The patient presented with headache with decreased visual acuity on the left eye, rapidly progressing to total left exophthalmos. On examination, we found a left exophthalmos with paraplegia and a pyramidal syndrome of both lower limbs. MRI demonstrated a large frontorbital process, which resulted in a downward globe displacement. The tumor demonstrated a high signal intensity on T1weighted images, an high signal intensity on T2weighted images and displayed a typical salt and pepper appearance. The patient had an incomplete removal of the tumour due to the very haemorrhagic character. We performed a cauterization contributing to the almost total devascularisation of the tumour. The patient had two other surgeries with an incomplete removal of the tumor due to the very haemorrhagic character. The anatomopathological study concluded to a paraganglioma. The patient was subsequently lost to follow-up. Orbital paraganglioma is an extremely rare benign tumor. Total excision orbitotomy is the treatment of choice.

### **P55- Giant Cell Tumor of the Temporal Bone**

Nesrine Nessib, Karmani N., Nessib A., Slimen A., Belhaj A., Mbarek C., Kallel J.

*Nerosurgery departement, National Institutet of neurology Tunis*

#### **Abstract :**

Giant cell tumor (GCT) is a benign tumor that originates from undifferentiated mesenchymal cells of the bone marrow. The cranium as well as temporal bone is a rare location for GCTs. Despite its benign nature, GCT may be locally aggressive and has the potential to recur locally. Surgical excision is the treatment of choice for patients with GCT. We report the case of a 42-year-old male without a pathological history, who presented with left otorrhea with evolving left hypoacusis for 8 months. On examination, the patient presented with otitis externa and was treated with antibiotherapy for one month with a good evolution. At the audiogram, we noted an evolving mixed deafness. MRI showed multi-loculated expansive process in the left temporal and infra-temporal fossae in contact with the temporomandibular joint, containing isosignal T1, hypersignal T2, early peripheral and late central enhancement compartments. A supra-atrial biopsy was performed and the anatomopathological examination concluded to a giant cell tumor. The patient has been referred for radiotherapy .Giant cell tumors of bone (GCTBs) are benign osteolytic neoplasms that can be treated with either gross-total resection or subtotal resection with adjuvant radiotherapy. For the rare GCTB of the temporal bone, close proximity to critical structures can produce functional deficits and make gross-total resection difficult to achieve without significant morbidity

### **P56- Hypothalamic hamartoma presenting with gelastic epilepsy: a case report**

Naceur Myriam, Ghedira K , Bedioui A , Kermani N , Slimane A , Kallel J

*Nerosurgery departement, National Institute of neurology Tunis*

#### **Abstract :**

Hypothalamic hamartomas are rare congenital malformations presenting with central precocious puberty, gelastic epilepsy and developmental retardation.

We report a case of an 3-year-old girl with recurring bloody vaginal discharge and gelastic epilepsy. Diagnosis of hypothalamic hamartoma was made on the basis of clinical findings and specific features on magnetic resonance imaging of the hypothalamic region. The patient underwent surgery and postoperative was uneventful.



Hypothalamic hamartomas (HHs) are non-neoplastic, heterotopic nodules resembling the normal gray matter of the hypothalamus. HHs have become well known because of the characteristic symptoms of central type precocious puberty and gelastic seizures (GS).

The accepted diagnostic criteria for GS include recurrent stereotyped fits of laughter, the absence of precipitating external factors, laughter inappropriate to context, laughter concomitant with other epileptic clinical manifestations, and ictal or interictal epileptiform electroencephalographic changes.

Hypothalamic hamartoma frequently poses a diagnostic dilemma. Patients may exhibit rare symptoms of gelastic seizures and precocious puberty associated with neuropsychological and psychiatric symptoms. Surgical treatment is essential. The benefits of resection for HH in such cases outweigh the risk of surgical complications; however, the surgical approach needs to be carefully selected and performed with the utmost caution in order to minimize morbidity.

### **P57- Paediatric pituitary adenoma**

Nesrine Nessib, Ghedira K, Naceur M, Kharrat MA., Abderrahmen K, Bouali S, Kallel J.  
*Neurosurgery department, National Institute of neurology Tunis*

#### **Abstract :**

Paediatric pituitary adenomas comprise rare and mostly benign but challenging pathologies in children and adolescents related to their endocrine and neurological characteristics. However, experience with transsphenoidal pituitary surgery has led to higher rates of cure. We report the case of a 15-year-old female, who was admitted for headaches with dysmenorrhea followed by secondary amenorrhea. The patient has no associated visual disorders. On examination we found no neurological nor endocrinological disorders. Endocrinological findings showed that pituitary hormone levels were within normal limits. MRI showed a well-limited intra- and supra-sellar expansive process.

The patient underwent a transsphenoidal pituitary surgery, with a partial excision because of its fibrous and hemorrhagic nature. The anatomopathological study concluded to a pituitary adenoma. In the postoperative period, the patient developed a corticotrophic insufficiency that has been supplemented. Although rarely fatal because of their unrestrained growth, pediatric pituitary adenomas can have a profound effect on the quality of life. Early evaluation and intervention, either medical or surgical, is

necessary in the child with a pituitary adenoma to avert permanent consequences of pituitary-related endocrinopathy.

### **P58- Skull Base Chondrosarcoma**

Nesrine Nessib, Slimane A., Najjar H., Karmani N., Kharrat MA., Aberrahmen K., Bouali S., Kallel J.

*Nerosurgery departement, National Institute of neurology Tunis*

#### **Abstract :**

Chondrosarcomas are malignant mesenchymal tumours occurring only rarely in the bones of the cranium. Less than 5% of all chondrosarcomas are located in the head and neck area and their commonest location is the ethmoids and the sphenoid sinus. They are slow-growing tumours with low malignancy rate and unclear histopathogenesis. Surgery is the treatment of choice, while radiotherapy has an adjunctive role. Chemotherapy is not effective. We report the case of a 28 year old male, who presents with diplopia and V2 neuralgia, the neurological examination was without abnormalities. MRI showed an expansive process of the left cerebellopontine angle, invading the left cavernous sinus, with osteolysis of the greater wing of the sphenoid, the foramen ovale, the petrous apex and the walls of the left carotid canal. The patient was operated on via a left retro sigmoid approach, with a large biopsy. The lesion was greyish yellow, gelatinous, with little bleeding. The anatomopathological examination concluded to a well differentiated chondrosarcoma grade I. The patient was referred to an adjuvant radiotherapy. Primary SBCs are rare and debilitating neoplasms that often require complex and multidisciplinary treatment planning. Surgical debulking and adjuvant radiotherapy protocols show favorable rates of symptomatic improvement and local tumor control, especially in patients with large tumors not eligible for gross total resection.

### **P59- Gangliocytoma of the cerebellum**

Naceur Myriam, kermani N, Slimane A, Belhadj A, Ghedira K , Kallel J

*Nerosurgery departement, National Institute of neurology Tunis*

#### **Abstract :**

Gangliocytomas are low-grade tumors of central nervous system, composed by well-differentiated neurons, that can arise in any location of the neuroaxis, showing predilection for supratentorial locations (temporal lobes).

It is a rare disease with a low incidence, and it is more common in children and young adults. If the tumor required intervention, the main treatment is surgery.



We report the case of a 28 year-old female with no medical history, who presented with a gangliocytoma of the cerebellum revealed by neurologic manifestations (headache, dyspraxia, equilibrium and gait disturbances). Diagnosis was made on surgical material after near total resection. She has been under routine follow-up for 3 years. On the last control, the brain MRI showed lesion stability.

Gangliogliomas and gangliocytomas are rare and benign neuronal tumors which affect young subjects. Neuroradiology is not specific, and these tumors are usually diagnosed at pathology. However, the diagnosis may be considered in young patients with a history of old, drug-resistant partial epilepsy and having a contrast-enhanced, calcified cystic lesion in the temporal lobe or the cerebellum

### **P33- Brain biopsy under stereotactic conditions: a study of 215 cases**

*Nesrine Nessib, Belhaj A., Najjar H., Ghedira K., Slimane A., Bouali S., Kallel J.*

*Neurosurgery department, National Institute of neurology Tunis*

#### **Abstract :**

Stereotactic brain biopsy is a widely used technique in routine neurosurgical practice, it allows the diagnosis of lesions whose access and surgery are very risky or lead to major sequelae. This is a retrospective descriptive and analytical study of 215 patients who underwent a brain biopsy under stereotactic conditions under CT control. The average number of biopsies per year over this period was 26.8 biopsies per year. The median age was 56 years. We noted a male predominance. The dominant functional sign was the presence of intracranial hypertension in 69.3% of patients. Epilepsy was second in 21.8% of patients. In 90.2% of cases the lesion was unique. In 41.8% of cases it was lobar and in 55.4% it was deep. The average size was 4.3 cm. A diagnosis was obtained in 98.1% of cases. Tumour lesions were detected in 97.6% of cases, dominated by glioblastoma. Eight patients had early postoperative complications dominated by surgical site haematoma. The deep location was found to be a risk factor for postoperative complications. The presence of intralesional haemorrhage preoperatively was not statistically correlated with the occurrence of early complications. The number of specimens and high-grade gliomas are not risk factors. Our work confirms that framed stereotactic biopsy is still an effective and safe way to obtain diagnoses on inoperable brain lesions.

**P60- Calvarial Langerhans cell histiocytosis: A case report**

*Hermassi Mohamed Aziz, Bouali S, Slimane A, Kharrat M, .Belhadj A, Karmeni N ..*

*Abderrahmen K, Ghedira K, Bouhoula A, Ben Said I, Kallel J*

*National institute of neurology; Tunis*

**Abstract :**

Langerhans Cell Histiocytosis (LCH) is the most common histiocytic disorder (à group of diseases affecting the macrophages and dendritic cells). Based on the number of lesions and the systems involved, LCH could present as a unifocal or localized pathological process, or a multifocal disease affecting an individual or multiple organ systems. The clinical presentation is variable and highly dependent on the severity and number of organs involved and might range from a self-limited condition to a life-threatening fatal disease. Although clinical manifestations and radiological features suggest an LCH diagnosis, histopathologic; and immunohistochemical examination confirm the final diagnosis.

LCH is most frequently encountered in the pediatric population. The majority of adulthood cases present before the age of 50 with cases presenting after this age being an exception. In light of this, we report the case of Calvarial Langerhans cell histiocytosis presented as isolated with magnetic resonance imaging (MRI) features in a 57-year-old patient with further histopathological confirmation and we will then discuss the clinical, radiological and therapeutic characteristics of this type of lesion in the literature.

**P61- Facial nerve schwannoma in temporal location: A case report**

*Hermassi Mohamed Aziz, Bouali S. Belhaj A, Slimane A, Karmeni N, Abderrahmen K,*

*Ghedira K, Ben Said I, Kallel J*

*National institute of neurology; Tunis*

**Abstract :**

Facial nerve schwannoma (FNS) is an uncommon benign tumor that develops from the Schwann cells of the facial nerve (FN). Although rare, it is the most common type of FN tumor and can affect any segment of the nerve. Nevertheless, a higher incidence of intracranial lesions and a predilection for the geniculate ganglion have been reported. Hearing loss, facial paresis and tinnitus are the most common symptoms. Conversely, signs of intracranial hypertension and seizures are uncommon in this type of lesion.



In this case report, we describe the rare case of a patient with an FNS located in the intratemporal part and geniculate ganglion of the FN, who consults for facial paresis with convulsions, we describe our medical-surgical diagnostic and therapeutic strategy and we will discuss thereafter the clinical, radiological and therapeutic characteristics of this type of lesion in the literature.

### **P62- Inflammatory pseudo tumors of the orbit: A case report**

Hermassi Mohamed Aziz, Bouali S, Slimane A, Karmeni N, Abderrahmen K, Ghedira K, Ben Said I, Kallel J

*National institute of neurology; Tunis*

#### **Abstract:**

Inflammatory pseudotumors of the orbit correspond to any intraorbital expansive process of inflammatory type.

This pathology corresponds to a non-specific inflammation of the structures of the orbit. It is a rare condition of unknown pathogenesis. Exophthalmos, ocular pain and local inflammatory signs are the most frequent symptoms. A complementary exploration by an orbital MRI is mandatory to detail the affected ocular structures and the degree of extension of the inflammation.

Since the early 1980s, after histological evidence by biopsy, systemic corticosteroid therapy has been the consensual first-line treatment for orbital inflammatory pseudotumors.

In case of partial control by corticosteroids, isolated observations or small series report success with conventional immunosuppressive agents such as methotrexate, azathioprine or even cyclosporine.

In cases of cortico-resistance or recurrence, some observations of remission of these lesions after treatment combining orbito-palpebral surgery, cyclophosphamide and external irradiation have been reported in the past.

We report in our case an inflammatory pseudotumor of the orbit in a 63-year-old male patient with a history of Wegener's disease since 2004 under corticosteroid therapy who consulted us for painful exophthalmos of the left eye. We describe our diagnostic and therapeutic strategy and we will discuss thereafter the clinical, radiological and therapeutic characteristics of this type of lesion in the literature.



**P63- Hypothalamic pituitary axis pathologies in children: clinical and radiological study of 31 cases**

Hermassi Mohamed Aziz, Slimane A, Bouali S, Karmeni N, Abderrahmen K, Ghedira K, Bouhoula A, Ben Said I, Kallel J

*National institute of neurology ; Tunis*

**Abstract :**

Introduction and problem: Abnormalities of the hypothalamic-pituitary axis are common in pediatric neuroradiology. The clinical presentation is not uniform, it goes through hormonal disorders reflecting either pituitary insufficiency or hormonal hypersecretion, or visual impairment and intracranial hypertension. Imaging, especially MRI, is an essential tool both for etiological diagnosis but also for the evolutionary aspect.

The objectives:

- Illustrate the normal radiological aspect of the hypothalamic-pituitary axis in children
- Expose the tumor etiologies collected over the last 5 years by focusing the study on the clinico-radiological correlations of the various abnormalities of the hypothalamic-pituitary axis.

Materials and methods: Retrospective study of clinical radio records involving 31 children suffering from pathologies of the hypothalamic pituitary region explored .

Results: In our series 31 patients 19 girls and 12 boys aged 9 years on average presented a varied clinical symptomatology alternating tumor syndrome and endocrine syndrome.

The imaging made it possible to identify 18 cases of tumor pathologies , 12 cases of malformative pathologies and one case of histiocytosis X.

Conclusion: Our study thus constitutes a generalist approach of hypothalamic-pituitary pathology particularly tumoral and malformative, covering the clinical, biological aspects but especially in imaging the saddle and supra-saddle lesions of the child.

**P64- Supratentorial ependymomas extra-ventricular in children: a case report**

Firdews Zulfa Benamara, Badach K., Bouguerra I. , Djafer M.

*Department of Neurosurgery , Mustapha Pacha Hospital*

**Abstract :**

Intracranial ependymomas are the third most common primary brain tumor in children, they are located in 40% of cases in the supratentorial region and in 60% of cases in the infratentorial region (95% at the floor of V4, 5% roof of V4 or lateral recess). Among supratentorial localizations, extraventricular ependymomas are a rare entity



**Materials and Methods:** We report the case of a strictly extra-ventricular supratentorial ependymoma in a 10-month-old infant that was treated surgically in our institute department. The extent of resection was classified as gross total and subtotal, and was determined by Ct scan and MRI scans. The ependymal tumors were classified according to OMS classification.

**Results:** Because of the extent of the tumour, a partial excision was performed with evacuation of the cyst.

The infant is then sent to oncology where he received chemotherapy.

**Discussion and results:** extraventricular supratentorial ependymomas are a rare entity. They are large compared to those sitting in the subtentorial and are often anaplastic.

Surgery remains the main treatment. Adjuvant radiotherapy should be discussed depending on the histology and the quality of the excision. Chemotherapy is discussed in case of tumor recurrence in adults or in case of partial excision in children with a desire to delay radiotherapy.

### **P65- Cerebellar Cavernous Malformation (Cavernoma): A Case Report**

*Firdews Zulfa Benamara, Badache K, Bouguerra I, Laidani M, Djaaffer M.*

*Department of neurosurgery , Mustapha Pacha Hospital*

#### **Abstract :**

Cavernous angiomas are a developmental type of intracranial vascular malformation which can be inherited or idiopathic. They are formed of a cluster of dilated weak-walled capillaries. They often present following a haemorrhage event in young adults as a range of neurological signs and symptoms, depending on the location of the lesion. They are best evaluated on MRI, which can also reveal associated developmental venous abnormalities.

This case presents a 41-year-old female who attended A&E with a four-day history of progressive dyscoordination of her left arm, unsteadiness with falls to her left side, frontal headache and nausea and vomiting. Examination revealed marked instability on standing causing her to fall to the left, and frank dysmetria, tremor and dysdiadochokinesis on the left.

A CT angiogram showed a hyperdense mass located on the superior cerebellar vermis with an area of calcification. No cerebral aneurysm or other vascular abnormality was demonstrated. An MRI the following day showed findings suggestive of a cavernous malformation.

She was admitted under the neurovascular surgical team for 2 weeks and treated symptomatically and conservatively with antiemetics and received physiotherapy.

Following improvement in her mobility she was discharged to await a repeat MRI scan as an outpatient.

### **P66- Brain metastasis of a vulvar tumor: a rare localization**

*Kais Bouzouita, Ghassen Gader, Mouna Rkhami, Skander Guediche, Mohamed Zouaghi, Mohamed Badri, Kamel bahri, Ihsèn Zammel*

*Department of Neurosurgery, Trauma and Burns Center, Ben Arous*

#### **Abstract :**

Introduction: Invasive vulvar cancers are uncommon, representing less than 5% of gynecologic cancers, predominantly in older women. Distant metastases are rare, about 3%. Metastases to the central nervous system are exceptional.

Observation: We report the case of a 45-year-old woman operated on in 2013 for a vulvar tumor classified as T2N2M0 who underwent vulvectomy with bilateral inguino femoral curage and adjuvant radiotherapy. The anapath concluded to an adenocarcinoma of the vulva. 2 years later, the patient presented with walking disorders with headache and vomiting. The examination revealed a static and kinetic cerebellar syndrome. Imaging revealed a left vermio-cerebellar lesion of 3 cm long axis with upstream hydrocephalus. The patient underwent surgery to remove the lesion. Anapath was in favor of a secondary localization of the vulvar adenocarcinoma in the posterior fossa.

Conclusions: The knowledge of this nosology is important especially to include the perineal study in the etiological assessment of intracranial metastases, which is often relegated to the background at the expense of the most frequent primary localizations

### **P67- Ophthalmic history of a recurrent meningothelial meningioma**

*Kais Bouzouita, Ghassen Gader, Mouna Rkhami, Skander Guediche, Mohamed Zouaghi, Mohamed Badri, Kamel Bahri, Ihsèn Zammel*

*Department of Neurosurgery, Trauma and Burns Center, Ben Arous*

#### **Abstract :**

Introduction: Frontal meningioma is a histologically benign tumor, but has the potential to be visually life threatening. Its extension to the periorbit and the difficulty of the neurosurgical approach make the curative treatment delicate. We report a case of frontal meningioma revealed by isolated ophthalmologic manifestations.

Case presentation: We report the case of a 62-year-old patient. His history dates back to 15 years with a progressive decrease in visual acuity in the left eye. The ophthalmological examination had concluded to a Foster Kennedy syndrome. Brain





MRI showed a large right frontal expansive process with radiological features consistent with a meningioma. The patient underwent surgery for removal of the meningioma (Simpson 3) and pathological examination concluded that it was a grade 2 meningothelial meningioma. 4 years after the first surgery, the patient presented a new aggravation with total blindness of the right eye. A new imaging study showed a recurrence of the meningioma in the same location, which led to a repeat surgery. This re-intervention could not improve the prognosis of the right eye which evolved towards progressive melting,

Conclusions: The evolution after removal of a meningioma depends on the degree of visual impairment and the quality of the surgical removal . The treatment is neurosurgical in association sometimes with a radiotherapy and this in spite of the spontaneously slow evolution.

#### **P68- Cerebellopontine angle arachnoid cyst treated by cyst cisternal shunt**

*Eya Chahed, Jemel N., Somrani K., Krifa Ml., Zouaghi M., Badri M., Zmmel I.*

CTGB

##### **Abstract :**

The cerebellopontine angle (CPA) arachnoid cysts are rare and often asymptomatic. They constitute approximately 1% of intracranial masses. The onset of symptoms and signs is usually due to the compression of the brain, cranial nerves and obstruction of CSF circulation. We report a 15 year old patient with a CPA arachnoid cyst who had a fenestration on March 2021. A year later, she was admitted for headaches. The MRI showed a large compressive CPA arachnoid cyst. We opted for a cyst cisternal shunt. the postoperative course was uneventful.

Our case suggest that a cyst cisternal shunt is effective.

#### **P69- Atraumatic asymptomatic dermoid ruptured cyst of the posterior fossa**

*Eya Chahed, Jemel N., Somrani K., Krifa Ml., Badri M., Zammel I*

CTGB

##### **Abstract :**

Dermoid cysts are extremely rare congenital malformation tumor. They represent less than 1% of all cerebral tumors. Their location in the posterior fossa remains uncommon. Rupture of intracranial dermoid cysts is a rare phenomenon. We present a case of

dermoid cyst, which had ruptured into ventricular system. The patient being asymptomatic, we opted for an annual checkup.

### **P70- Cerebral metastasis of a thymoma**

*Eya Chahed, Jemel N., Krifa Ml., Guediche S., Somrani K., Badri M., Zammel I*  
CTGB

#### **Abstract :**

Thymic epithelial tumors (TET) are rare lesions. The brain metastases of these tumors are even rarer. We report a case of brain metastases in a known patient with a thymoma for which he received a chemotherapy. Brain MRI revealed five lesions. He underwent craniotomy and resection of the left cerebellar metastasis. Postoperative histological examination confirmed metastasis of the original thymoma.

Most cerebral metastases are extremely rare. Outcome remains poor and life expectancy is very short when brain metastasis is present. Treatment for thymoma is multimodal, including surgery, irradiation and chemotherapy.

### **P71- Delayed brain metastasis from renal cell carcinoma: About a case report**

*Ahmed Amine Daoued, Kolsi F. Chérif I. Kamoun T. Boudaouara M.Z.*  
Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax

#### **Abstract :**

Renal cell carcinoma (RCC) is the kidney's most common type of malignancy. Approximately, it is accounted for 1% of all adult malignancies. RCC is the most common kidney cancer that tends to metastasize to the brain in about 4-11% of cases with an average interval from nephrectomy to brain metastasis of 1-5 years. Thus, it is difficult to know the exact percentage of patients with kidney cancer that is or will become metastatic. The rarity of this disease makes the prognosis unknown, and in most cases, poor because of the lack of an effective treatment for this chemo and radio-resistant malignancy. Treatment options include brain surgery as much as possible, whole brain radiotherapy, and targeted therapy seems to improve the overall survivor. Physicians know that late recurrence is one of the specific behaviors of RCC; unfortunately, little is known about the phenomenon. In the present study, we report a case of a double delayed cerebral metastasis of RCC. The first one occurs initially 8 years after nephrectomy and the second 5 years after surgery associated to whole brain radiotherapy and targeted therapy.



**P72- Pleomorphic Xanthoastrocytoma: a rare astrocytic tumor Case Report and literature Review**

*Wièm Mansour, Mahmoud Ben Messoud - Rihab Ben Fredj - Mohamed Chabâne -  
Abdelmajid Mlaïki - Iadh Ksira  
CHU Sahloul Sousse - Tunisia*

**Abstract :**

Introduction: Pleomorphic Xanthoastrocytoma is a rare primary central nervous system tumor of adolescents and young adults , classified among the low grade astrocytic tumors. It accounts for less than 1% of all astrocytomas and is known to have a good prognosis , exhibiting a 10-year survival of more than 70%. Clinical presentation depends on the localization of the tumor but seizures remain the most frequent presentation. Surgery remains the cornerstone of treatment. Adjuvant radiotherapy showed no clear survival benefit obtained. The treatment is frequently added in case of incomplete gross resection or in case of anaplastic features.

Observation : We report the case of a 16-year old female who presented for epileptic seizure evolving since 3 years , partially responding to treatment. She had no intracranial hypertension syndrome nor visual disorders. Clinical examination showed no abnormalities. An MRI was performed showing a left, well limited frontal tumor. The patient underwent surgery with complete resection of a yellowish , friable tumor. Post operative follow up was uneventful and histological examination concluded to a pleomorphic astrocytoma.

Conclusion : Grade II Pleomorphic Xanthoastrocytoma is a disease of young adults with favorable prognosis. Younger patients and patients who undergo a gross total resection, have a better outcome. There is inadequate evidence at present to recommend either adjuvant chemotherapy or adjuvant radiation routinely in all patients.

**P73 - Rare location of a dermoid cyst: the orbit**

*KHADIDJA YOUBI, DJOULANE K.-KHABIL T.-BEKRALAS H.*

*Service Neurochirurgie CHU BEJAIA*

**Abstract :**

Introduction : Intra-orbital dermoid cysts are benign tumors representing 1% of intracranial tumors. These are embryonic lesions resulting from an anomaly during

gastrulation and neurulation. The prognosis is good subject to early and quality surgical excision.

Materials and methods : We report the case of the 64-year-old patient A.Y among 08 cases of intra-orbital tumors, taken care of at the level of the neurosurgery department, CHU Bejaïa. The patient presents an isolated left axile, non-pulsatile and non-reducible proptosis evolving for more than 6 months, the radiological exploration revealing a well-circumscribed extra-conical intra-orbital lesion in hyper signal in T1, T2 and flair. A pterional microsurgical approach was performed at her home, the excision was complete.

The postoperative course was favorable.

Discussion : The goal of surgical treatment in intra-orbital dermoid cysts is complete removal, removing the capsule. Our case is distinguished by the fairly advanced age of manifestation (65 years) and the infrequent intra-orbital location.

Conclusion : Intraorbital dermoid cysts are considered rare, benign tumors. The surgical difficulty is related to capsular adhesion.

#### **P74- Male breast cancer revealed by a Cerebellar metastasis : A Case Report**

*Senda Lafif, Ben Selma H., Ben Messaoud M., Chabaane M., Ben Fredj R., Bounemra M., Ksira I.*

*Neurosurgery Department, Sahloul Hospital*

#### **Abstract :**

Introduction : Brain metastasis occur in 20-40% of patients with cancer and their frequency has increased over time. Breast cancer is the second most common cause of metastatic brain disease and is most frequently diagnosed in women. Its prevalence in the male population represents 1% and the diagnosis is often misleded.

Case report: We report a case of a brain metastasis from breast cancer, in a 48-year-old man who was hospitalized with a history of progressive headache, walking and equilibrium disorders, without vomiting or nausea. On admission, the patient showed a GCS of 15/15, a static and right kinetic cerebellar syndrome, with no motor deficiency. The cranial nerve examination showed no abnormalities. An MRI was performed, showing a right cerebellar lesion, heterogenous with a double solid and cystic component, Hypointense in T1 sequence, Hyperintense in T2 and Flair, compressing the 4th ventricle, with no signs of hydrocephalus. A surgical resection was performed



and the pathology concluded to a metastasis of a breast invasive carcinoma of no special type (NST).

A thoracic, Abdominal and pelvic CT was later performed, and confirmed the diagnosis of Breast Cancer. The patient endured a left mastectomy and was referred to an oncologist for further adjuvant therapy.

Conclusion : Male breast cancer (BC) is rare and not much is known about it. Treatment recommendations are typically extrapolated from data available from clinical trials enrolling female BC patients.

### **P75- Intubation of patient with tight trismus for brain abscess surgery**

*Dr DERGUINI Meriem, Dr SAADI Oumayma, Pr MAKHLOUFI Hichem*

*Département d'Anesthésie Réanimation chirurgicale. CHU Constantine. Algeria*

#### **Abstract :**

Treatments of some facial cancers by radiotherapy engender noxious effects: hypocellular, hypovascularization, hypoxie of the irradiated tissues, which lead to immediate and chronically oral complications such as mucositis, fibrosis, xerostomia, decay, or osteoradionecrosis

Sinonasal and temporal bone infections may extend to the skull, skull base, meninges, pericerebral spaces, brain parenchyma and dural sinuses, either via contiguous or hematogeneous spread. All may result in brain abscess.

Trismus indicates severely restricted mouth opening of any aetiology. A mouth opening of 35 mm or less should be regarded as trismus.

Trismus is frequently seen in patients suffering from malignant tumours of the head and neck. The reported prevalence of trismus in those patients varies considerably in the literature and ranges from 0 to 100% depending on the tumour site and extension.

For the case we are reporting, our patient is a woman of 61 y.o, with a history of cavum cancer treated by radiotherapy, declared cured but leaving her with loud complications as osteoradionecrosis of the base of the skull secondary to aspergillosis and a very tight trismus. The patient arrived with brain abscess; wich was fed by a spread. Surgery was indicated to evacuate the abscess and close the spread, but the anesthetic approach was difficult by the trismus.

In case oral intubation is not possible like with our patient, other alternatives are possible as nasofibroscopy with local anesthesia.



**P76- Frontal and supraorbital extension of acinic cell carcinoma of the paranasal sinuses: a case report and review of the literature**

*Slim Gallaoui, Ben Fredj R., Daoud H., Chabaane M., Ben Messaoud M, Ben Selma H., Ksira I.*

*Departement of Neurosurgery CHU Sahloul*

**Abstract :**

Acinic cell carcinoma is a rare, slow-growing malignant epithelial tumor, which preferentially affects the salivary glands, accounting for about 2.4% of salivary tumors, particularly the parotid gland (3% of all parotid tumors). It is exceptional in the nasal cavities. They can evolve locally or spread to the surrounding lymphatic tissue, lungs, bones...

This case report illustrates a primary ethmoido-frontal acinic cell carcinoma.

Our 43 year old patient was admitted with a left fronto-orbital swelling filling the inner nail of the left eye, of progressive onset, pushing the eyeball to the left, with bilateral nasal obstruction. Brain MRI showed a mass of the anterior floor of the skullbase in the left ethmoidofrontal region. Anatomopathological examination concluded in an acinic cell carcinoma. After 8 months, the MRI showed a local recurrence extended to the retro orbital region and the right nasal cavity with a basi-frontal right subcentimetric lesion.

Anatopathological findings also concluded in an acinic cell carcinoma.

Acinic cell carcinoma is a rare entity, affecting the salivary glands and may exceptionally reach the nasal cavities and extend into the supraorbital region. This tumor is potentially recurrent. The metastatic risk is low and mainly lymph node related. Given the small number of cases, there is no therapeutic consensus, but wide excision seems to be the reference treatment, followed or not by radiotherapy.

**P77- AT/RT : A rare tumor with an extremely poor prognosis**

*Slim Gallaoui, Ben Fredj R., Daoud H., Chabaane M., Ben Messaoud M., Ben Selma H., Ksira I.*

*Departement of Neurosurgery CHU Sahloul*

**Abstract :**

AT/RTs are rare and highly malignant embryonal tumors of the CNS comprising approximately 3% of pediatric brain tumors. The prognosis of AT/RT is poor: its growth



is fast and its recurrence is rapid despite an aggressive treatment including surgery, chemotherapy and radiotherapy.

We describe the first case report of a 17 month-old boy admitted for a 2-month history of increased intracranial pressure. He was conscious, hypotonic with a convergent strabismus. A brain MRI was performed showing a right frontoparietal mass. The child underwent a surgery with a macroscopic complete resection. The histopathological diagnosis was an AT/RT. Two months later, a recurrence was diagnosed on the MRI. An urgent surgical treatment was performed. Unfortunately, the patient died 3 days later in the intensive care unit. Our second patient was an 18-month-old girl who presented an altered consciousness. The MRI showed a left parietal mass. She underwent emergency surgery with immediate postoperative death. The pathological diagnosis was an ATRT tumor.

Our last case concerned a 3-year-old boy admitted with a status epilepticus. Emergency surgery with incomplete removal of a left frontal tumor was performed. The anatomopathological analysis also showed an AT/RT and the patient died after one week.

AT/RT tumors in children remains extremely malignant with a very high rate mortality, explaining the poor prognosis in most cases. Given its rarity, the optimal treatment for AT/RT remains unclear.

### **P78- Pseudotumour cerebri: Our experience**

*Lynda Atroune, Kamel Bouaita, Soumia Benallag, Nawel Habchi, Miloud Djafer*  
*Neurosurgery Departement, Mustapha Bacha University hospital*

#### **Abstract :**

Idiopathic intracranial hypertension (IIH) is defined by the existence of intracranial pressure greater than 15 mm Hg sustained. The clinical signs revealing an IIH are above all, headaches that are resistant to analgesics, jet vomiting and visual disturbances (papilledema, diplopia).

The objective of our study is to evaluate the use of acetazolamide in the management of IIH in hospitalized patients in our neurosurgery department. We retrospectively collected data from all patients admitted and managed for IIH in our departement. 72 Patients were diagnosed with IIH, aged between 09 and 57 years old with an average age of 28 years old, 36% of our patients were aged between 20 and 30 years old. The

sex ratio f/h was 8/1. Clinical manifestations of the IIH are those of any intracranial hypertension. Headache with nausea and/or vomiting is one of the major initial manifestations in most series as it was in ours: 88% headache, 12% vomiting and 10% diplopia.

Visual disorders are the most common complications of IIH, bilateral decrease in visual acuity was found in 49 patients (68% of our population) and one patient having bilateral blindness, bilateral papilledema was observed in 28 patients (46%) of which grades II, III, IV were 9%, 22%, 16% respectively, 7 patients had optic atrophy (9%). The fundus was without abnormality in 10 patients (11%). Brain MRI showed no abnormality in 46 patients (63%), cerebral imaging revealed an empty Sella turcica in 7 patients (7%), an arachnoid

### **P79- Awake mapping in the pediatric population**

*Lynda Atroune, Kamel Bouaita, Soumia Benallag, Nawel Habchi, Miloud Djafer  
Neurosurgery Departement, Mustapha Bacha University hospital*

#### **Abstract :**

Awake brain surgery is now a common practice. Even though it's getting more and more enriched when it comes to adults; its literature remains poor in children.

The aim was to study the feasibility of this procedure in the pediatric population and to note the specificities to be taken into account in particular in regards of the child's conditioning.

**Materials and methods** We described the case of a 15-year-old left-handed patient presented with right rolandic operculum glioma revealed by epilepsy resistant to therapy.

**Results** We had the patient's full cooperation; the tests used were the same used in adults. Motivational and language mapping has been positive. Regardless of the question of bad collaboration we encounter in young children under the age of 10, certain anatomical and functional particularities such as cortical and sub-cortical myelination, maturation of functional networks can influence the direct electrical stimulation method and may limit its use in children.

**Conclusion:** The Improvement of individualized management of patients can only be achieved if the research's perspectives on cognitive functioning are optimized with the need to adapt the tools for language assessment.



**P80- Complications Related To The Sitting Position In Neurosurgery: Anesthesia point of view.**

*OMAYMA SAADI, Dr Meriem DERGUINI, Pr Hichem MAKHLOUFI*

*Département d'anesthésie réanimation CHU Constantine*

**Abstract :**

Positioning of the neurosurgical patient has several features such as the existence of specific positions (i.e: sitting, prone hyperlordotic, crouching ou kneeling positions) or the range of facilities for the same surgical indications.

The seated position allows an optimal surgical approach to the supra- and infra tentorial posterior cerebral fossa and to the spinal cord. Gravity makes the operative field less hemorrhagic and facilitates the operating procedure and hemostasis.

Complications of installation in a seated position associate gas embolism, pneumocephaly, instability, cardiac and cerebral hemodynamic complications, quadriplegia and peripheral neuropathies. Although there are various studies based on the relative safety of this installation, its use remains controversial.

We report in this document the experience of the neurosurgery department CHU Constantine Algeria

**P81- Tasks selection in awake brain surgery**

*Lynda Atroune, Kamel Bouaita, Soumia Benallag, Nawel Habchi, Miloud Djafer*

*Neurosurgery Departement, Mustapha Bacha University hospital*

**Abstract :**

The main goal in management of low grade glioma is to have a positive impact on the natural history of disease, especially by increasing overall survival, and to preserve or even improve quality of life.

Awake mapping has been shown to represent most reliable method to optimize “;onco-functional balance”; which we define as a compromise between achieving maximum tumor resection together with preservation of maximum function.

Perisylvian regions in the left dominant hemisphere have been classically described as involved in language. Consequently, specific tasks have been applied during surgery for tumors located in these areas in order to avoid permanent postoperative oral or written language disturbances.

Performing movements of the contralateral hemibody when the resection comes very close to the pyramidal and thalamocortical pathways adds valuable information for preserving fine motor function essential for a normal quality of life.

Spatial cognition can be identified and preserved with a high level of reliability during resection within the right parietooccipital junction by asking the patient to perform a line bisection task.

The optimization of selection of intraoperative tasks for awake surgery is based on an improved understanding of the individual patient's functional anatomy and brain connectivity, as well as their interactions with the natural course of the tumor.

### **P82- Malignant transformation of a desmoplastic infantile ganglioglioma**

*Hajer Kammoun, Abdelleh C., Boukhit M., Elmir A., Maamri K., Darmoul M.*

*Fattouma bourguiba neurosurgical department*

#### **Abstract :**

Introduction: Desmoplastic infantile ganglioglioma (DIG) is a rare, predominantly cystic, supratentorial neoplasm of early infancy, representing 1.25% of all intracranial tumors in children. Malignant transformation to a glioblastoma is exceptional. Our case is the 4th in literature.

Case report : It's about a 6-year-old female patient who presented in January 2021 with a rapidly progressive IH syndrome related to a right solido-cystic parieto-occipital lesion with mass effect on the ventricular system. She underwent a macroscopically complete resection, confirmed by a postoperative MRI, concluding in a DIG.

As part of her follow-up, a new cerebrospinal MRI was performed in March 2022 concluding in the recurrence of a right voluminous parieto-occipital mass. A surgical revision was performed with a subtotal resection. The histology concluded to an infantile desmoplastic ganglioglioma that had progressed to a glioblastoma.

The patient was addressed to postoperative chemotherapy.

Discussion: DIG is classified by the WHO as a low-grade superficial desmoplastic neuroepithelial tumor of infancy. Despite the large size of these tumors, the prognosis is generally favorable after gross-total resection. Still, according to literature, 40% of the patients may require further medical, radiation, and/or surgical intervention, and 15% develop leptomeningeal spread. Exceptionally, malignant transformation occurs and some correlated genetic alterations were identified.





### **P83- Glioblastoma of The Posterior Fossa in Children: Report of Three Cases and Review of The Literature.**

*Abdel Ileh C., Farhat S., Boukhit M., Maamri K., El Kahla G., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

Background: Glioblastomas (GBM) in children are rare. The cerebellar localization is even rarer with only 38 cases described to date.

Method: This is a retrospective study of three cases of GBM of the posterior fossa in children treated in the department of neurological surgery of Fattouma Bourguiba University Hospital, Monastir, Tunisia during the last five years with a review of the existing literature.

Through this study, we describe the clinical, radiological, pathological, therapeutic and evolutionary characteristics of posterior fossa GBMs in children.

Results: For a total of 41 cases, the revealing signs were intracranial hypertension symptoms. The average age at presentation was 8.8 years with no sex predilection. Imaging showed a large lesion with heterogeneous contrast enhancement and little edema in most cases. Macroscopically complete surgical resection was performed in 47.4% compared to 45.5% of incomplete resections. Only one patient presented with a gigantocellular glioblastoma. 75.7% of patients received radiation therapy and 65.7% received chemotherapy. The median overall survival was 12.21 months.

Conclusion: GBMs of the posterior fossa in children have a poor prognosis. The onset of symptoms is rapid and often consists of signs of increased intracranial pressure. MRI remains the examination of choice but does not make it possible to establish differential diagnoses. The gigantocellular subtype, a very rare entity, seems to have a better prognosis and long

### **P84- Psychosis Revealing a Pituitary Adenoma: Case Report and Review of Literature**

*Mohamed Amine Hadj Taieb, Elouni E, Abdelileh C, Boukhit M, Maamri K, Ben Ncir A, Darmoul M*

*Neurosurgery departement, Fatouma Bourguiba University Hospital Monastir*

#### **Abstract :**

BACKGROUND: Neurocognitive and psychological dysfunctions associated with pituitary adenomas (PAs) are clinically relevant, though probably under-reported.

METHODS: We present a case of a 45-year-old man admitted to the psychiatry department with psychosis and behavioral problems. He was treated initially with

neuroleptic drugs. CT scan and Brain MRI showed a sellar mass with suprasellar extension. There were no abnormalities in the hormone profiling. The patient was operated on via a transsphenoidal approach. A gross total resection was performed.

RESULTS: The postoperative course was uneventful and the patient's symptoms disappeared. Therefore, he did not need the neuroleptic treatment anymore.

CONCLUSIONS: Pituitary adenomas have been recently shown to be associated with altered neurocognitive and neuropsychological functions. Psychological disorders can be seen in Cushing's disease, acromegaly, Prolactin-secreting adenomas, and even nonfunctioning adenomas.

### **P85- Giant Invasive prolactinoma in a prepubescent boy: A case report**

*Mohamed Amine Hadj Taieb, Boudabbous W, Souei Z, Farhat S, Trifa A, Darmoul M  
Neurosurgery departement, Fatouma Bourguiba University Hospital Monastir*

#### **Abstract :**

BACKGROUND: Pituitary adenomas are extremely rare in prepubescent children. While overall prolactinomas in the <20 years age group are more common in females, the proportion of macroprolactinoma vs microprolactinoma is greater in males, particularly for large invasive tumors.

METHODS: A 12-year-old boy presented with painless progressive vision loss on the left side. On general examination, he exhibited bilateral gynecomastia. A magnetic resonance imaging scan revealed a sellar tumor with suprasellar extension measuring 60\*51\*36 mm.

The patient was operated on via a left pterional approach. We performed a partial resection allowing decompression of the left optic nerve.

RESULTS: The postoperative course was uneventful. The patient's vision improved. The histopathological diagnosis was prolactinoma.

CONCLUSION: There is sufficient evidence that prolactinomas are more aggressive and proliferative in males than in females, and are also more aggressive and proliferative in the pediatric age group.





**P86- Pediatric Supratentorial dysembryoplastic neuroepithelial tumor-like pilocytic astrocytoma: a case report and review of the literature.**

*Mohamed Boukhit, Hadhri M., Farhat S., Haj Taieb M., El Kahla G., Darmoul M.  
Department of Neurosurgery - University Hospital of Monastir, Tunisia.*

**Abstract :**

Background: Pilocytic astrocytoma (PA) typically shows biphasic pattern with a mixture of loose microcystic and compact regions, in which it is not uncommon to see heterogeneous morphology. PA type that shows similarity to dysembryoplastic neuroepithelial tumor (DNT) in both histological morphology and immunophenotype are rare.

Method: A 13-year-old boy was referred to our hospital with a focal epilepsy and headache. Magnetic resonance imaging examination revealed a left cystic round frontal parasagittal mass with focal gadolinium enhancement suggesting a PA. The lesion was totally removed via a left frontal parasagittal craniotomy. Intraoperatively, the lesion was well circumscribed without obvious capsule. The substance within the tumor was jelly like. The classical biphasic pattern of PA was not observed. Immunohistochemically, neuronal marker NeuN was expressed in tumor cells scattered in the background which simulated its expression morphology in DNT..

Results: The patient is free of local recurrence and dissemination eleven months after surgical resection of the lesion.

Conclusion: PAs are heterogeneous tumors in histological morphology, immunophenotype and molecular characteristics. We report here a case of PA that both histological morphology and immunophenotype are similar to DNT, which expanded the morphological profile of PA.

**P87- Remote epidural hematoma - An Unusual complication of endoscopic transsphenoidal surgery: A case report**

*Mohamed Boukhit, Boudabbous W., Haj Taieb M., El Ouni E., Hadhri M., El Kahla G.,  
Maamri K., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

**Abstract :**

Background: The endoscopic transsphenoidal approach is a minimally invasive technique to access the seller region. This approach carries rare and dangerous

complications due to the proximity of major intracranial vessels and multiple cranial nerves

Method: We report the case of a 61-year-old man who underwent urgent endoscopic transsphenoidal surgery for pituitary apoplexy. Post-operative CT showed acute left temporal epidural hematoma. We decided on conservative management with serial CT scans and close neurological observation.

Results: Patient was discharged after one week. On The Follow-up, patient was stable, without any complaints, but visual loss persisted. Head MRI was done, showing a temporal arachnoid cyst.

Conclusion: Endoscopic transsphenoidal surgery also carries the potential risk of remote epidural hematoma, careful steps must be taken to prevent this serious complication during transsphenoidal surgery

### **P88- Pediatric Dermoid cyst of the head and neck: Case report and review of the literature**

*Chiheb Abdel Ileh, Elouni E., Boukhit M., Maamri K., El Kahla G., Darmoul M. Department of Neurosurgery &#8211; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

INTRODUCTION: Dermoid cysts are unusual neoplasms that often present in childhood, with the orbit being the area most commonly affected in the head and neck region. By reviewing the literature, we aim to determine the characteristics and treatment outcomes of paediatric dermoid cysts.

CASE REPORT: A 3 months-old boy presenting with a swelling of the occipital and upper neck that his mother had noticed since the age of 30 days. The mass was enlarging rapidly. Physical examination revealed a soft, non-fluctuant, non-tender neck mass measuring approximately 6 cm in its greatest dimension.

DISCUSSION: A dermoid cyst is a benign cutaneous developmental anomaly that arises from the entrapment of ectodermal elements along the lines of embryonic closure. These benign tumours are lined by stratified squamous epithelium with mature skin appendages found on their wall and their lumens filled with keratin and hair. Dermoid cysts are considered to be congenital, but not all of them are diagnosed at birth. Only about 40% of dermoid cysts are diagnosed at birth, while about 60% of the dermoid cysts are diagnosed by five years of age.

CONCLUSION: complete surgical excision without disruption of the cyst wall by an experienced surgeon is recommended as a treatment for dermoid cyst. Early surgical



excision allows obtaining a histologic diagnosis and to avoid complications such as intra cranial extension and bone deformity.

**P89- A case of spontaneous regression of an aneurysmal bone cyst of the skull**

*Ines CHERIF, KOLSI F., GHORBEL M., DAOUED AA., BOUDAWARA MZ.  
Neurosurgery Department of Habib Bourguiba University Hospital, Sfax*

**Abstract :**

Aneurysmal bone cyst is a benign lesion that often starts off the metaphysis of long bones. Only 3-6% of cases are located in the skull. Spontaneous recovery has been reported, but remains very rare.

A 7-year-old boy admitted for a swelling in the right frontal region. Physical examination revealed a non-tender mass, which was firm to hard and fixed to bone. Cranial imaging showed an expansile extra-axial osteolytic heterogeneous mixed density mass of the right frontal bone causing break and thinning of both outer and inner cortex. It was in direct contact with the superior sagittal venous sinus. This multilocular cystic mass is well circumscribed with fluid-fluid levels indicating hemorrhage. The cyst was heterogeneously enhanced after Gadolinium injection including the septa. An angiographic study of both external carotid arteries was performed. The tumor derived its blood supply principally from both anterior and posterior frontal branches of the superficial temporal artery. Surgery without embolization was thus decided, but it was postponed. The patient presented two weeks later for spontaneous regression of his swelling. The MRI showed that the overall size of the cyst had hugely decreased. On consultation, 6 months later, there was no evidence of recurrence.

Spontaneous regression of aneurysmal bone cyst has already been reported but remain rare. As the tumor is benign, treatment that is too invasive should be avoided.

**P90- Venous hemangioma of the cranial vault: A real nosographic challenge!**

*Ines CHERIF, KOLSI F., DAOUED AA., KAMMOUN TL., BOUDAWARA MZ.  
Neurosurgery Department of Habib Bourguiba University Hospital, Sfax*

**Abstract :**

Introduction : The study of vascular anomalies, called "hemangiomas," tumors and vascular malformations of the cranial vault is complicated by the wide nosographic variety used in the literature.



**Material and methods :** We report cases of vault hemangiomas that were recorded during a period of 14 years in the neurosurgery department of Habib Bourguiba University Hospital, Sfax. A retrospective study reclassified these 3 cases as intraosseous venous malformations according to the ISSVA 2014/2018 classification.

**Results :** It was about 3 femals, with a mean age of 47.3 years. Headache was the main symptom of all patients. The brain scan allowed the diagnosis of hemangioma in 2 patients and of hemangioblastoma in one case. Treatment consisted of removal of the lesion with cranioplasty in two cases and biopsy in one case. Histological examination concluded to an intraosseous hemangioma in all cases.

**Conclusion :** Intraosseous venous malformations affect with predilection the vertebrae and more rarely the cranial vault. These lesions are often confused with hemangiomas. The distinction between the different entities of intraosseous vascular malformations is essential. Indeed, the management may vary according to the type of vascular anomaly, thus influencing the prognosis.

### **P91- Ependymal cyst: Case report**

*Bourgou Malek, BEN ATIG Fatma, GHEDIRA Khalil, BELHAJ Alaa, ABDERRAHMEN Khansa, KALLEL Jalel*

*National institut of neurology*

#### **Abstract :**

Intracranial ependymal cysts are rare, histologically benign neuroepithelial cysts that mostly occur in the cerebral parenchyma. The majority of these cysts are clinically silent and discovered incidentally, but when symptomatic they may compress surrounding structures, thus surgical intervention is needed.

We present a case of a 33 year old women who presented to our emergency with a rapid progressing intracranial hypretension syndrom. Brain MRI showed an intra parenchymal vermien well-defined cyst, thin-walled and do not contrast enhance

The patient underwent a suboccipital craniectomy and a gross total resection of the lesion. Histological examination of the resected tissue demonstrated that, it was an ependymal cyst

Since there is often times a clinico-radiological discordance they are generally incidental findings in majority of cases. While complete surgical excision is the treatment of choice for the symptomatic cysts, cystic fluid diversion presents a better compromise nevertheless in cases where this may not be achieved.



**P92- Esthesioneuroblastoma: a case report**

*Omar Hattab, Abdelhafidh Slimane - Haifa Mechergui -Med Ali Kharrat -Nadhir Kermani- Khansa Abderrahmen - Jalel Kallel*

*National institut of neurology Tunis*

**Abstract :**

INTRODUCTION: Esthesioneuroblastoma is a rare a rare tumor that represents 3% of all nasosinus tumors. The symptomatology is essentially rhinological. We report the observation of a young patient with an Esthesioneuroblastoma with intracranial extension revealed by an Increased ICP.

CASE DESCRIPTION : It's a 10 years old patient with no particular pathological history who presented a intracranial hypertension syndrome evolving for one month with a tonic-clonic seizure. On the examination we found a bilateral hyposmia.

Brain imaging showed a basi frontal lesion extending through the ethmoidal cells towards the left nasal cavity. The anatomopathology examination showed an Esthesioneuroblastoma.

DISCUSSION : The esthesioneuroblastoma was first described in 1924 by Berger et al. It is a rare tumor representing 1.2% of all nasosinus malignancies. In most of the series, this tumor affects both sexes equally. It occurs at any age but 2 peaks of frequency are classically described between 10 and 20 years of age, and between 50 and 60 years of age. No risk factor has been clearly identified in the literature. Clinically, the tumor is revealed by rhinological, ophthalmological and neurological symptoms, The treatment is, complete excision surgery removal followed by radiotherapy.

CONCLUSION : Esthesioneuroblastoma is a rare tumor whose symptomatology is usually poor ,The treatment is essentially based on the most complete surgery followed by radio-chemotherapy

**P93- pituitary gland Spindle cell oncocytomas**

*Omar Hattab, Khilil Ghdira - Haifa Mechergui- Sofiene Bouali - Khansa Abderrahmen - Jalel Kallel National institut of neurology Tunis*

**Abstract :**

Introduction : Spindle cell oncocytoma is a rare tumour of the pituitary gland with a dual diagnostic and therapeutic problem. Given the non-specific nature of the presentation, the diagnosis is based solely on anatomopathology. It is likely that the surgery quality

will condition the prognosis, but this surgery is not without risks and no prognostic factor has been identified to date. The number of cases described is currently not high enough to conclude to a standardised management.

Method : Our case is about a 60 year old man who had headaches and a rapidly new occurring diplopia. He had a bitemporal hemianopsia on the examination

Result : The patient underwent trans-sphenoidal surgery with a good operative follow-up. A complete excision was made .Anatomopathology concluded that it was a spindle cell oncocytoma of the pituitary gland.

Conclusion The evolution of these benign tumours is not much described in the literature, is characterised by a tumour progression that can threaten the visual prognosis and require early surgery. In addition, they are hypervascularized tumours that causes preoperative difficulties and have a much higher risk of haemorrhage than adenomas, which limits the possibility of complete removal.

**P94- Vault metastases of a thyroid carcinoma mimiking a meningioma : about two cases**

*Nesrine Nessib, SLIMANE A, MECHERGUI H, GHEDIRA K, BELHAJ A, KARMENI N, KALLEL J*

*Service de neurochirurgie Institut de neurologie Mongi Ben Hamida*

**Abstract :**

Metastases of the vault of thyroid carcinoma are rare. The majority of these metastases are secondary to follicular carcinoma, those of papillary carcinoma are rarer. We report two cases of secondary vault metastasis of thyroid carcinoma. We report a case of a 74-year-old woman, who complains of headache, with alteration of the general condition. Clinical examination revealed a confusion with left hemiparesis. She presented with a straight frontal mass of 10 cm long axis. MRI brain showed intra and extra cranial frontal lesion which causes bone lysis. Surgical excision and histological examination concluded to a metastasis of thyroid papillary carcinoma.

The second case we report is about a 70-year-old woman known to have an inoperable thyroid goiter who presented a swelling of the right frontal area, well limited, painless, ulcerated. The neurological examination was without particularities. Cerebral CT showed a right fronto-temporal tissue lesion that is heterogeneously elevated. Excision of goiter and metastasis was performed with good evolution post-operative. Histological examination concluded that thyroid carcinoma was vesicular. Metastases of thyroid



carcinomas affect the lungs (49%) and less frequently the vault (1.8 - 5.8%). The metastases of the vault must be considered in the case of any osteolytic lesion, so that these lesions must be resected completely.

**P95- Association of acute ischemic stroke and pituitary adenoma: it's a coincidence?**

*Talel Lotfi Kamoun, KOLSI F., CHERIF I., AFFES A., BOUDAWARA MZ Service de Neurochirurgie de Sfax*

**Abstract :**

Pituitary adenomas are mostly benign, slow-growing tumors that arise from cells in the pituitary gland, They cause symptoms by either hyper or hypo-secreting hormones, and/or by mass-related effects (Headaches, vomiting, disturbances of the patient's vision). Although they are quite rare, there have been multiple reports of Pituitary apoplexy causing ischemic strokes in patients by compressing the cavernous sinuses and obliterating the cavernous portion of the internal carotid arteries. The association of pituitary adenoma without apoplexy is extremely rare. We report the case of a 44-year-old man without any known history of chronic diseases who presented with a sudden onset of hemi-paresia and signs of intracranial hypertension ( headaches and vomiting). The patient had left hemiparesis, hyperreflexia, and a positive Babinski sign on examination. He Had a visual Acuity of 3/10 bilaterally. His MRI showed an ischemic stroke of the right internal capsule and left thalamus, a lacunar infraction of the pons, and a sellar and supra-sellar macroadenoma compressing the optic chiasm. His hormonal explorations came back normal. His Supra-aortic vessels showed no significant stenosis. His echocardiography showed hypertensive cardiopathy with a conserved ejection fraction. His thrombophilia tests came back negative, his ANA too came back negative. He is programmed for a trans-sphenoidal resection of his adenoma.

**P96- Neuroepithelial cyst: Report of two cases and review of the literature**

*Malek Bourgou, BEN ATIG Fatma, GHEDIRA Khalil, BELHAJ Alaa, ABDERRAHMEN Khansa, KALLEL Jalel*

*National institut of neurology*

**Abstract :**

Among benign intracranial cysts, neuroepithelial cysts represent a heterogeneous group of lesions with a significant discrepancy in their nomenclature including ependymal cysts, gliependymal cysts, neuroglial cysts &#8230; They are uncommon ,

congenital, ependymal-lined cysts most frequently encountered in a supratentorial location, with a predilection for the frontal lobe. Preoperative diagnosis of a neuroepithelial cyst is challenging since there is clinical and radiological similarities with other cystic lesions. Herein we report two cases of neuroepithelial cysts, diagnosed and operated in the department of neurosurgery at the national institute of neurology of Tunis with special reference to radiological features histological findings and differential diagnosis.

**P97- Brain metastasis from testicular non-seminomatous germ cell tumors (NSGCT): Case Report and Review of Literature**

*Fatma ben atig, BOURGOU Malek , GHEDIRA Khalil, BELHAJ Alaa, ABDERRAHMEN Khansa ,KALLEL Jalel*

*National institut of neurology*

**Abstract :**

Testicular non-seminomatous germ cell tumors (NSGCT) are malignant neoplasms derived from totipotent stem cells. They account for approximately 40% of testicular tumors with the highest incidence between ages 15 and 35. These tumors are known to metastasize to the lung and to the liver; brain is the least common site accounting for a mere 1.2%.

We hereby report a 20-year-old male diagnosed as testicular non-seminomatous germ cell tumor treated with orchidectomy and chemotherapy. 11 months later, he developed a huge frontal brain metastasis revealed by symptoms of increased intracranial pressure and confirmed by histopathological examination. After surgical removal, the patient was treated with radiotherapy and chemotherapy

Starting by this case report, we reviewed the relevant literature to focus on the radiological features, therapeutic strategies and the prognosis of this rare entity.

**P98- Brain metastasis from bladder urothelial carcinoma; a case report**

*Imen Barnaoui, Nesrine Nessib, Kerima BelhajAli, Mohamed Dehmani Yedeas, Ridha Chkili, Mondher Yedeas*

*service de neurochirurgie, Hôpital Militaire Principal d'Instruction de Tunis*

**Abstract :**

Central nervous system metastases in urothelial carcinoma are uncommon and occurring in a context of multiple metastases.



We report the case of a 62-year-old patient with a history of a bladder tumor revealed by a macroscopic hematuria in April 2020 and treated with 5 sessions of neoadjuvant chemotherapy followed by a total cystoprostatectomy with urostomy in October 2022. The histological examination confirmed the diagnosis of an infiltrating urothelial carcinoma. After two months, our patient reported headaches, vomiting and rapidly progressive vertigo. Neurological examination found right static and kinetic cerebellar syndrome. A cerebral MRI showed a massive right cerebellar lesion with three intracranial infracentimetric lesions in left frontal cortex, right parasagittal frontal lobe and protuberance. We performed a total mass resection of the cerebellar tumor with a histological examination that confirmed the diagnosis of a cerebellar metastasis of an infiltrating urothelial carcinoma.

Due to the limited number of cases in the literature, the optimal modality for the treatment of urothelial cancer with brain metastases is still unclear. However, several authors suggest that resection of the metastatic lesion may benefit urothelial cancer patients with brain metastases. Although these CNS metastases are very rare, a search for brain metastases is necessary, given its important role in the control of the disease.

### **P99- Pediatric cerebellar ganglioglioma: A case report**

*Haifa Mechergui, Slimane ABDELHAFIDH, Omar HATTAB, Mohamed ali KHARRAT, Nadhir KERMANI, Khansa ABDERRAHMEN, Jalel KALLEL*

*Neurosurgery, national institut of neurology, Tunis*

#### **Abstract :**

Ganglioglioma is an uncommon primary lesion of the central nervous system that is typically located supratentorially. The cerebellar location is exceptional however the major location is the temporal lobe. We report the case of 9-year-old girl who suffers from paroxystic headache and visual blur since 3 years. Since 3 months she develops a gait disturbance. The ophthalmic examination showed a bilateral papilledema stage 3. The brain MRI showed a right large enhancing cerebellar mass with cystic component compressing the fourth ventricle associated to hydrocephalus. After complete resection of the tumor, the patient became symptom free. Histological examination on the tumor disclosed glial cells and dysplastic ganglion cells. Although it is a rare tumor, in the appropriate clinical setting, a GG should be considered in the presence of a cerebellar mass with both solid and cystic components on magnetic resonance images in children

**P100- Multiple myeloma presenting as a recurrent chronic subdural hematoma:  
case report of an extremely rare presentation**

*Haifa Mechergui, Slimane ABDELHAFIDH, Siwar FARHAT, Aziz HERMASSI, Khansa ABDERRAHMEN, Nadhir KERMANI, Jalel KALLEL*

Neurosurgery, national institut of neurology , Tunis

**Abstract :**

Despite accounting for approximately 10% of all hematologic cancers, less than 1% of multiple myeloma cases present with CNS involvement. We report a very rare case of a multiple myeloma diagnosed after a recurrent chronic subdural hematoma. It is about a 52 year-old high functioning male, with a past medical history consisting of asthma, hypertension and Widal disease, presents with headaches , binocular pain, photophobia and nausea with a four day duration. There was no trauma history. CT scan revealed a right-sided chronic subdural hematoma (upper left). A first burr hole craniostomy was performed with symptom resolution. Two days later the patient has a symptomatic recurrence (upper right) and underwent a new surgery with reopening of the burr holes. Again, after a two-day period of asymptomatic state, the symptoms reappeared (bottom left). The decision was to proceed with a full craniotomy. At surgery, it was apparent an extensive fleshy membrane with an organized chronic subdural hematoma. After the third surgery (bottom right), there was no symptom recurrence. Due to a postoperative anemia and a highly recurrent chronic subdural hematoma with no apparent cause, a full workout was completed. Based on blood tests and a myelogram, a IgM-type multiple myeloma was diagnosed. A lumbar puncture revealed atypical cells morphologically similar to plasmocyte.

**P101- Rare case of metastatic pituitary disease**

*Haifa Mechergui, Slimane ABDELHAFIDH, Siwar FARHAT, Mariam NACEUR, Imed BEN SAID, Khansa ABDERRAHMEN, Jalel KALLEL*

Neurosurgery, national institut of neurology, Tunis

**Abstract :**

Metastatic involvement of the pituitary gland is extremely rare. We present a case of metastatic pituitary disease with panhypopituitarism and diabetes insipidus. Breast and lung cancers are the most primary malignancies producing pituitary metastasis. Posterior pituitary lobe involvement is seen more commonly in pituitary metastasis, with



diabetes insipidus being the common presentation. It is difficult to differentiate pituitary adenoma from metastasis through radiological imaging alone and often require clinical picture and biopsy for confirmation. Prognosis of pituitary metastasis is poor and related to the histological subtype and stage of the primary malignancy rather than to the presence of such metastasis

### **P102- Brain astroblastoma: a case report and review of literature**

Haifa Mechergui, Slimane ABDELHAFIDH, Firas SLITI, Aziz HERMASSI, Khansa ABDERRAHMEN, Jalel KALLEL

Neurosurgery, national institut of neurology, Tunis

#### **Abstract :**

Astroblastoma is an extremely rare brain tumor (0.45-2.8% of brain tumors. This tumor often affects young subjects.

We report the case of a 34-year-old woman with no previous pathological history who consulted the emergency room for progressively worsening headache. The patient underwent a brain MRI showing a right parietal process. She underwent surgery for her tumor. The anatomopathological examination was in favor of an astroblastoma. The postoperative course was simple and the postoperative imaging did not show any tumor recurrence.

Astroblastoma is a specific brain tumor that usually localizes to the frontal and parietal lobes. The risk of recurrence after surgery and radiotherapy is considerable with an overall survival that rarely exceeds 3 years.

### **P103- Pediatric gliosarcoma : a case report and literature review**

Haifa Mechergui, Khalil GHEDIRA, Sofiene BOUALI, Malek BOURGOU, Khansa ABDERRAHMEN, Jalel KALLEL

Neurosurgery, national institut of neurology , Tunis

#### **Abstract :**

Introduction:

Gliosarcoma is a malignant glial tumor. It usually affects adults between the fifth and sixth decade. Children are rarely affected by this entity. We report the case of an infant operated on at the National Institute of Neurology of Tunis for a gliosarcoma.

Clinical case:

We report a case about a 11-month-old child with no notable pathological history who was admitted for macrocrania with signs of intracranial hypertension. A brain MRI showed a large right frontal expansive process (9X7 cm). The tumor was removed. The anatomopathological examination was in favor of a gliosarcoma. The postoperative course was complicated by the appearance of a bilateral subdural hygroma requiring a subdural-peritoneal shunt. Given his age, the child was referred to the oncology department for chemotherapy. The child died 18 months after surgery.

Conclusion:

Gliosarcoma is a malignant brain tumor that rarely affects children. Its treatment is based on

#### **P104- Management of Giant Vestibular Schwannomas: bi centric study**

Zohra SOUEI, HADHRI M.M., BEN FREDJ R. BEN NSIR A. KSIRA I. DARMOUL M. FATTOUMA BOURGUIBA University Hospital, Sahloul University Hospital

Abstract :

The incidence of giant (> 4cm) vestibular schwannoma (VS) is estimated to be up to 2% of all VS. Brainstem compression in these cases makes their management challenging. Extensive knowledge of the cerebellopontine angle and adequate microsurgical skills allow preservation of neuro-function and reduce common post-operative complications. Twenty-five patients with giant VS were operated between January 2005 and December 2018. Our aim was to evaluate the clinical and radiological aspects of these tumors, the surgical results and to present the management nuances, which we believe can improve surgical outcomes.

Progressive unilateral hearing loss was the most common symptom. It presented with other signs of brainstem/cranial nerves compression 60% of the revealing modes of this tumor. Before surgery all patients had non serviceable hearing. Four patients presented with radiological signs of acute hydrocephalus and required immediate cerebrospinal fluid diversion.. All tumors were removed via a retro sigmoid approach. Surgical resection was total in 4 cases, subtotal in 13 cases and partial in 8 cases . The anatomic integrity of the facial nerve was preserved in 16 cases (64%) and facial function was excellent or good (Grade I-II) in 10 cases, fair (Grade III IV) in 6 cases. Giant VS are considered a separate entity owing to their surgical difficulty and increased morbidity. Early diagnosis and multidisciplinary cooperation are the key to improve outcome of giant VS



## **CRANIAL VASCULAR**

### **P105- Infrequent delayed contralateral remote cerebellar hemorrhage after supratentorial craniotomy in adult patient: a case report**

*Mohamed Ghorbel, Borni M, Abdelmouleh S, Boudawara M.Z Neurosurgery département, Habib Bourguiba Hospital, Sfax*

#### **Abstract :**

Remote cerebellar hemorrhage (RCH) as a rare complication of supratentorial surgery was already first described in the 1970s by Yasargil. Its incidence ranges from 0.2% to 0.4% after supratentorial craniotomies. Although its incidence is low, the volume of reports with remote cerebellar hemorrhage in the literature has been growing in recent times.

The authors report here a new case of a contralateral remote cerebellar hemorrhage after 24 hours of supratentorial craniotomy for a solitary brain metastasis of a pulmonary adenocarcinoma in a 59 year-old male patient with unbalanced high blood pressure

### **P106- neuroanesthesia for brain aneurysm surgery**

*Dr DERGUINI Meriem, Dr SAADI Oumayma, Pr MAKHLOUFI Hichem*

*Département d'Anesthésie Réanimation chirurgicale. CHU Constantine. Algeria*

#### **Abstract :**

Brain aneurysms are a cerebrovascular disease in which a weakening of a cerebral artery causes an abnormal focal dilatation. Microsurgical and endovascular treatment aims to eliminate brain aneurysms from cerebral circulation and prevent rupture.

An interdisciplinary approach is common with the involvement of the neurosurgeon and the anesthesiologist.

The fundamental perioperative goals are the same as for other intracranial vascular procedures: maintain optimal cerebral perfusion pressure, prevent increases in intracranial pressure, prevent bleeding and brain edema.

There is better therapeutic solutions for brain aneurysms such as stent and embolization, but in countries with limited resources, surgery still the main way to save patients

**P107- Acute monocular blindness revealing an ophthalmic carotid aneurysm**

*Benbelgacem Amal, Maatoug A, Masmoudi M, Rkhami M, Belhadj A, Badri M, Ben Salem M, Bahri K, Zammel I*

*Neurosurgery department , Trauma Center , Ben Arous*

**Abstract :**

INTRODUCTION: Ophthalmic carotid artery aneurysms constitute 0.3% to 1% of intracranial aneurysms. As with intracranial aneurysms in other positions they present mainly with subarachnoid haemorrhage but, in spite of their close proximity to the optic nerve, visual involvement is infrequent. Decreased visual acuity and ocular paralysis are the most common ophthalmologic manifestations, with sudden blindness rarely seen.

CASE REPORT: A 57-year-old woman, presented with headaches and left sudden blindness. The examination revealed a conscious patient with no meningeal signs, a left monocular blindness and a convergent strabismus. A brain scan showed an interhemispheric meningeal haemorrhage. MRI angiography showed a left carotido-ophthalmic saccular aneurysm.

She underwent embolization and presented partial recovery of visual acuity in the left eye rated at 2/10.

DISCUSSION: Carotid-ophthalmic aneurysms are more common in women, more frequent on the left side, and more prone to multiplicity. They are the least likely to rupture. Even when unruptured, they can cause visual disorders, mainly decreased visual acuity and oculomotor paralysis. Sudden loss of vision is a rare manifestation of carotid-ophthalmic aneurysms due to optic nerve damage. It may occur abruptly, following rupture of the aneurysm, or more often gradually.

CONCLUSIONS: Ruptured and giant ophthalmic carotid aneurysms should be treated. There is no solid therapeutic consensus yet.

**P108- Tumefactive Cerebral amyloid angiopathy mimicking a brain tumour:**

**Clinical and radiological characteristics of one case**

*Mohamed Ghorbel, Daoud.A, Kolsi.F, Cherif.I, Boudawara.M.Z*

*Habib Bourguiba Hospital, Departement of Neurosurgery*

**Abstract :**

Cerebral amyloid angiopathy (CAA) is a common age related cerebral small vessel disease, characterised by progressive deposition of amyloid- $\beta$ ; (A $\beta$ ;) in the wall of small to medium sized arteries, arterioles and capillaries of the cerebral cortex



and overlying leptomeninges. Previously considered to be a rare neurological curiosity, CAA is now recognised as an important cause of spontaneous intracerebral haemorrhage and cognitive impairment in the elderly. Our understanding of the pathophysiology and clinical manifestations of CAA continues to evolve rapidly. In rare instances, CAA manifests an infiltrative translobar masslike lesion, called tumefactive CAA. Standard magnetic resonance imaging (MRI) sequences are insensitive for detecting the microhemorrhages associated with tumefactive CAA, potentially delaying consideration of the correct diagnosis if gradient echo or susceptibility weighted imaging (SWI) is not performed. The purposes of this study were to describe imaging findings associated with this uncommon and underrecognized entity and to evaluate the role of SWI MRI sequences in its diagnosis.

### **P109- A Frontal Syndrom Revealing A Giant Pericallosal Aneurysm**

*Chiheb Abdel Ileh, Kammoun H., Boukhit M., Haj Taieb M., El Kahla G., Hadhri M., Maamri K., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

Background: Aneurysms are said to be "giant" from a size of 25mm. They are rare entities, distributed differently from small aneurysms, predominate on the carotid, are frequently calcified, particularly at the level of the neck, and are seen more frequently in women.

Method: We report the case of a 47-year-old male patient with the history of post-traumatic epilepsy, hypertension and heavy smoking who presented a typical frontal syndrome evolving for 15 days. Examination found left hemiparesis with mixed aphasia.

The cerebral CT scan showed a large, roughly oval, polylobed lesion measuring 7 cm in long axis, slightly hyperdense with multiple peripheral calcifications and strong contrast uptake.

Results: The abnormal contrast enhancement motivated the practice of a cerebral angiography which revealed a giant aneurysm of the left pericallosal artery. The aneurysm had a wide neck taking the callosomarginal artery and a circulating part of

2, 5cm. A first attempt of endovascular was not successful. The patient developed a drug-resistant status epilepticus two days later leading to the patient's death.

Conclusion: A giant pericallosal aneurysm can present with a frontal syndrom and should be included in the differential of giant front masses especially in the setting of major contrast uptake. A careful selection of patients, taking into account the anatomical characteristics of the aneurysm should prompt the best endovascular/surgical management of the aneurysm.

### **P110- A Primary occipital intraosseous Vascular malformation revealed by a Hydrocephalus**

*Asma Elmir, Elouni E., Abdel Ileh C., Boudabbous W., Trifa A., Elkahla G., Ben Ncir A., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

Background: Intraosseous vascular malformations (IOVMs) represent a subtype of venous vascular malformations that arise primarily in bone. They are rare in the craniofacial region. When found within the facial skeleton, calvaria, and skull base, IOVMs may demonstrate an aggressive appearance.

Method: We report the case of a newborn from a well-followed pregnancy, with prenatal discovery of hydrocephalus due to a posterior cerebral fossa lesion. This newborn had an almost complete removal of the lesion at the age of 12 days.

Result: The follow-up cerebral scan showed regression of hydrocephalus and the patient was discharged 4 days postoperatively. The anatomopathological examination revealed an IOVM that was partially thrombosed.

Conclusion: We report an extremely rare case of intraosseous vascular malformation involving the occipital bone, responsible for hydrocephalus and discovered during intrauterine life.

### **P111- Reptured aneurysm of a presistant trigeminal artery junction: a rare case report**

*Ahmed Amine Daoued, Kolsi F., Chérif I, Kamoun T., Boudaouara M.Z.*

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

#### **Abstract :**

The persistence of the trigeminal artery (PTA) corresponds to the persistence of a shunt between the carotid and vertebrobasilar systems. Between 0.1% and 0.6% of



people have it, making it unusual to find this anastomotic abnormality. Additional anomalies in intracranial veins frequently accompany it. The presence of an aneurysm originating directly from the course of the trigeminal artery is uncommon and has only been described in 1 to 2% of cases, which is why our case is interesting.

We herein present the case of a 51-year-old patient, with no history, who reports the onset of sudden onset headaches, immediately maximal, associated with several episodes of projectile vomiting. She also complains of photophobia and sonophobia. No history of head trauma or fever was mentioned.

On neurological examination, the patient is conscious and cooperative but very complaining. She has no sensory-motor deficit. She had a stiff neck. The Kerning and Brudzinski signs are negative. A CT brain scan showed subarachnoid hemorrhage WFNS 1, Fischer 3, completed by a CT angiography, revealing a ruptured aneurysm of a trigeminal artery, type three of the Saltzman classification. The patient underwent a status epilepticus, indicative of a rebleeding, following which the patient died.

### **P112- An unusual presentation of Gayet-Wernicke encephalopathy in a pregnant woman**

*Ahmed Amine Daoued, Kolsi F. Ayadi K. Chérif I. Boudaouara M.Z.*

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

#### **Abstract :**

Gayet-Wernicke encephalopathy is an uncommon neurologic disease that can cause severe morbidity and mortality, if untreated. W.E is known to be caused by a deficiency in thiamine or vitamin B1. It is a serious condition, with severe morbidity and mortality. It is underdiagnosed in children and adults. W.E. is frequently associated with chronic alcohol intake. However, many other conditions can be the cause such as bariatric surgery, starvation, intractable vomiting, and chronic renal failure.

Diagnosis of W.E. is clinical and magnetic resonance imaging (MRI) helps confirm it. Treatment is simple but must be urgent to prevent severe sequelae, such as Korsakov syndrome, and death.

We herein report a case of a 37-year-old woman at 30 weeks of pregnancy who was referred to our hospital for severe acute and unusual headaches. A clinical exam

found a conscious woman. A meningeal syndrome and palsy of the right sixth cranial nerve were objected. The patient had an urgent cerebral CT scan with radioprotection measures for the fetus. The CT scan was normal. Cerebral MRI was performed the following day. It showed a symmetrical bilateral hyper signal of the mamillary bodies on Fluid-Attenuated Inversion Recovery sequences. Gayet-Wernicke encephalopathy was suspected. The patient had an urgent intravenous supplementation of Thiamine. The headache decreased gradually. Oral supplementation of thiamine was continued until the end of pregnancy. She gave birth to a healthy baby girl.

### **P113- Aneurysm of the vein of Galen: A report of 3 cases**

*Ahmed Amine Daoued, Kolsi F. Chérif I. Kammoun T. Boudaoura M.Z.*

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

#### **Abstract :**

A rare congenital condition with a generally dismal prognosis is an aneurysm of the vein of Galen. Of cerebral arteriovenous malformations, it makes up less than 1%. Vascular exploration using pulsed and color Doppler sonography has made it easier to diagnose this vascular abnormality intra-uterinally. Due to the large, persistent systemic shunt, medical treatment is ineffective, and pregnancy termination may be performed with a parental agreement in some situations when the patient exhibits all symptoms of cardiac decompensation. Infants, on the other hand, who have typical velocity waveforms and a limited amount of the systemic shunt have a successful extrauterine adaption. We herein present 3 cases from the neurosurgery department of Habib Bourghiba; University Hospital of Sfax



## **CONGENITAL – MALFORMATIVE**

### **P131- Hemimegalencephaly with prominent ipsilateral facial hypertrophy**

*Seraj Ajaj, Faisal Bentaleb, Jamal Elaser, Khawla Shlaibek*

*Tripoli University Hospital*

#### **Abstract :**

Hemimegalencephaly is an uncommon congenital malformation with unilateral enlargement of the hemicerebrum. Here we report a 1 month old male child who presented at our neurosurgery outpatient clinic with recurrent seizures and facial asymmetry. CT and MRI of the brain revealed diagnostic characteristic features of hemimegalencephaly associated with ipsilateral facial congenital infiltrating lipomatosis.

### **P132- Endoscopic third ventriculostomy, our experience**

*Daoud Souad, Ferrah Sofiane*

*Neurosurgery department of Oran -ALGERIA*

#### **Abstract :**

For many years, internal derivations by implantation of shunts have been the only treatment for hydrocephalus but also the subject of many complications, which has led the neurosurgeon to develop endoscopic surgery, especially endoscopic third ventriculostomie and choroid plexus coagulation. The objective of our work is to report the experience of the Neurosurgery Department of Oran university hospital in the treatment of pediatric hydrocephalus by endoscopic surgery, through a retrospective study, conducted from October 1st , 2019 to September 30th, 2022. We performed 67 endoscopic procedures in 63 patients under the age of 15 years, four of whom were operated on twice. The average age of our patients was 20.38 +/- 3.6 months with a slight female predominance (3 girls for 2 boys) and 75% malformations. We identified 17 complications in the immediate postoperative, represented by seizures (15%), subdural collections (6%), cerebrospinal fluid fistulas through the scalp scar (3%) and infectious complications (1%). The success rate of endoscopic treatment of hydrocephalus in our series was 74.62%. We lamented two deaths (3%).

**Conclusion:** Endoscopic surgery presents few complications. It represents an effective alternative for the treatment of pediatric hydrocephalus.

**Key words:** Endoscopic Third Ventriculostomy - coagulation of choroid plexuses hydrocephalus &#8211; pediatric patients

### **P133- Malformation of the cervical-occipital hinge with diplopia**

*Nesrine Nessib, Simane A., Bedoui A, Karmani N, Naceur M, Aberrahmen K., Kallel J. Neurosurgery departement, National Institute of neurology Tunis*

#### **Abstract :**

Chiari I malformation is a congenital, neurological condition that is characterized by defects of the skull base resulting in herniation of the cerebellum through the foramen magnum into the cervical spinal canal. Because the condition can result in visual symptoms, patients will often search for answers from their eye care providers.

Diplopia is not frequently associated with Arnold-Chiari I malformation. We report the case of a 16-year old boy, without a pathological history, who reports the sudden onset of an horizontal binocular diplopia without any traumatic context. On examination, the patient presented a right convergent strabismus and a gaze-evoked nystagmus. Magnetic resonance imaging (MRI) showed malformation of the cervico-occipital hinge with ptosis of the tonsils without hydrocephalus nor syringomyelia. The patient underwent a suboccipital craniectomy which resulted in lessened nystagmus, diplopia regression and improved symptoms. Acquired esotropia, often in association with other eye movement abnormalities, may be an early sign of Arnold-Chiari I malformation. Neurosurgical suboccipital and upper cervical decompression may lead to improvement or resolution of diplopia.

### **P134- Peritoneocentesis trocar versus conventional laparotomy for distal catheter placement in ventriculo-peritoneal shunt**

*Ahmed Amine Daoued, Kolsi F. Chérif I. Raddaoui. W Boudaouara M.Z.*

*Neurosurgery Departement, "Habib Bourghiba" University Hospital of Sfax*

#### **Abstract :**

Hydrocephalus is a common brain condition treated by neurosurgery with various surgical techniques. The ventriculoperitoneal shunt is the most used procedure. The



complication rates of this procedure are considerably high. The majority of which involve the peritoneal catheter. The placement of this catheter by conventional laparotomy is the mostly used which leads to dangerous complications. A new technique was described in 2011 using a peritoneocentesis trocar to avoid conventional laparotomy. Since 2014, in the neurosurgery department of Habib Bourguiba University Hospital of Sfax, Tunisia, ventriculoperitoneal shunts were done either by peritoneocentesis trocar or conventional laparotomy. Our objective was to compare the results of these two surgical techniques in terms of benefits and complications. This retrospective mono-center multiple-surgeon study was conducted between 2014 and 2019. We include all patients treated for hydrocephalus by ventriculoperitoneal shunt using patients' data to fill our study form.

Through this study, we have been able to demonstrate that there was no significant difference between both surgical techniques in terms of complications in general, but peritoneocentesis trocar was associated with specific difficulties. The difference between conventional laparotomy and peritoneocentesis trocar was rather in terms of the duration of surgery steps. Using the trocar reduces the duration of both the overall surgery procedure and the abdominal step

### **P135- Giant Parieto-Occipital Encephalomeningocele with Microcephaly**

*Haj Taieb M., Boudabbous W., Boukhit M, El Mir A, Hadhri M, El Kahla G, Maamri K, DARMOUL M.*

*Service de Neurochirurgie Monastir*

#### **Abstract :**

**BACKGROUND:** Encephalomeningoceles are subtypes of neural tube defects (NTD) characterized by meninges and/or brain tissue protrusion due to a skull defect.

We described a case of a newborn boy with a giant occipital mass born to a mother with folic acid supplementation.

**RESULTS:** MRI of the brain and the spine confirmed that the mass was an encephalomeningocele.

**CONCLUSION :** Folic acid confers an advantage but the relationship with the causation of NTD is still not clear

**P136- Amygdalohippocampectomy for Refractory Mesial Temporal Lobe Epilepsy: The Tunisian Experience**

*Haj Taieb M., Kammoun H., Boukhit M., El Kahla G., Ben Ncir A., Darmoul M.  
Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

**Abstract :**

Background: Mesial temporal lobe epilepsy is the most common form of human epilepsy for which surgery has become the standard of care. Amygdalohippocampectomy is suggested to be a safe and effective surgical procedure with the advantage of a better cognitive outcome.

Method: 15 cases of medically intractable mesial temporal lobe epilepsy with hippocampal sclerosis were operated in Fattouma Bourguiba university hospital between June 2016 and December 2020. Candidates for surgery were determined as those with concordant clinical characteristics, ictal recordings and imaging findings.

Results: There was no major surgery related complication. Minor complications occurred in 13.3 % of all cases: all of them recovered few weeks following surgery. At the end of follow-up period, 73.3% of patients were Seizure free, 63.3% were medication free and 54% experienced significant improvement of their mood disorders.

Conclusion: Amygdalohippocampectomy is a safe and effective surgical procedure for patients with intractable mesial temporal lobe epilepsy.

**P137- Fulminant idiopathic intracranial hypertension with severe vision deficits: A case report**

*Mohamed Amine Hadj Taieb, Boudabbous W, Abdelileh C, Souei Z, Elkahla G, Trifa A, Darmoul M*

*Neurosurgery departement, Fatouma Bourguiba University Hospital Monastir*

**Abstract :**

BACKGROUND : Fulminant idiopathic intracranial hypertension is defined as intracranial hypertension with no secondary cause, severe vision loss within 4 weeks of symptom onset, and progressive vision loss over days.



**METHODS :** We report a case of a 32-year-old obese male (BMI 32) with a medical history of idiopathic intracranial hypertension treated with a ventriculoperitoneal shunt. He was admitted to our department with a severe headache and blurred vision for one week.

**RESULTS :** The VP shunt was working correctly. However, the patient presented a rapid worsening of symptoms suggestive of a fulminant course of the disease.

**CONCLUSIONS :** Fulminant vision loss occurs in 2&#8211;3% of patients with IIH. Rapid recognition of fulminant IIH is of critical importance as delay in definitive surgical intervention frequently results in permanent, profound visual disability

### **P138- Acquired Chiari I Malformation Secondary to a Supracerebellar Arachnoid Cyst**

*Chiheb Abdel Ileh, Boudabbous W., Haj Taieb M., Maamri K., El Kahla G., Darmoul M. Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

#### **Abstract :**

**Background:** Chiari I malformation involves caudal displacement of the cerebellar tonsils below the foramen magnum. It is usually congenital, although rarely may be acquired. The causes of acquired Chiari I malformation include trauma, adhesive arachnoiditis, posterior fossa mass lesions, spontaneous intracranial hypotension and post-theco-peritoneal shunt. Chiari I malformation due to supracerebellar arachnoid cyst has been rarely reported in the literature.

**Method:** A 38-year-old male presenting a supracerebellar arachnoid cyst associated with a Chiari I malformation managed by foramen magnum decompression. Imaging done post-operatively showed upward displacement of the cerebellar tonsils with a decompressed craniovertebral junction.

**Discussion:** The posterior fossa mass lesions reported to cause CM include arachnoid cyst, acoustic neuroma, cerebellar astrocytoma, meningioma, medulloblastoma and metastasis. The combination of supracerebellar arachnoid cyst with Chiari I malformation is very rare.

The treatment options recommended in the literature for posterior fossa arachnoid cysts with CM are either surgery for the cyst alone or in combination with foramen

magnum decompression. The choice of therapy would depend on the site of the arachnoid cyst and the presenting complaints.

Conclusion: Supracerebellar arachnoid cyst can be a rare cause of acute Chiari I malformation. management of such cases depends on cyst localisation and patient complains.

**P139- Surgical Management of Leukoencephalopathy with Calcifications and Cysts** *Moamed Boukhit, Kammoun H., Haj Taieb M., El Mir A., El Kahla G., Maamri K., Darmoul M.*

*Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

**Abstract :**

Background: Leukoencephalopathy with cerebral calcifications and cysts (LCC) is a rare autosomal recessive disease. Only 15 adult cases were reported to date.

Metod: We present the case of a 67-year-old patient who presented with headaches, gait imbalance and partial seizures for the past two months. MR of the brain revealed several supra tentorial cysts. The largest is a right thalamic cyst surrounded by calcifications and hemorrhage. Multiples infra tentorial bilateral lesions surrounded by perilesional edema were also noted. Imaging features were suggestive of LCC.

Results: An endoscopic fenestration of the right thalamic cyst was done. Two years later a cyst regrowth was noted. A second attempt was performed and was inconclusive. Patient's general condition deteriorated gradually and he ultimately succumbed to this disease one year later.

Conclusion: Clinical presentations of LCC are variable. Typical neuroimaging features of LCC include diffuse leukoencephalopathy, multiple intraparenchymal cysts with contrast enhancement, asymmetric calcification in the deep cerebral nuclei and white matter, and unusual bleeding in parenchyma or cysts. Absence of normal brain metabolites is reported in MR spectroscopy of cysts. Surgical treatment should be indicated for decompression in case of symptomatic cyst. The preferred procedure is endoscopic fenestration or stereotactic cyst aspiration.



**P140- A rare Association of a Lumbar Meningocele and a Tailgut Cyst**

*Asma Elmir, Farhat S., Elouni E., Boudabbous W., Trifa A., Ben Ncir A.,  
Darmoul M. Department of Neurosurgery; University Hospital of Monastir, Tunisia.*

**Abstract :**

Background: Tailgut cysts are rare developmental cysts arising from remnants of the embryological postnatal gut. Despite being frequently located in the presacral space, isolated cases of aberrant locations have been reported, including, perirenal, perianal, and subcutaneous sites.

Method: A 15-month-old infant presenting with two masses at the level of the lumbosacral spine. The masses are well circumscribed, have a smooth surface, covered by normal skin, not pulsatile, and slip under the palpating finger. Whole-spine MRI revealed an open spinal dysraphism combining lumbosacral myelomeningocele, Diastematomyelia and lumbosacral intradural cystic lesion located at level exhibiting hyperintensity on T2-weighted images not enhancing when contrast was administered.

Results: A surgery to repair the defect and cyst excision was performed, and pathological analysis confirmed the diagnosis of tailgut cyst.

Conclusions: The anatomical position and rarity of the tailgut cyst led to difficulty firstly in diagnosis and secondly in surgical.

**P141- A case of sinus pericranii in a young child**

*Ines CHERIF, KOLSI F., BEN BELGACEM A., AFFES A., BOUDAWARA MZ.  
Neurosurgery Department of Habib Bourguiba University Hospital, Sfax*

**Abstract :**

Sinus pericranii is a very rare venous malformation characterized by an aberrant connection between the intracranial and extracranial venous systems, causing varicose dilation of these veins. Diagnosis in early childhood is infrequent.

The patient was a 2-years-old girl, operated on an interventricular communication at the age of 6 months, with normal psychomotor development for his age. From birth, a soft purplish swelling of 3cm diameter was present on the occipital scalp ; its size fluctuated with crying. The diagnosis of an encephalocele was evoked after a trans fontanelar ultrasound. The MRI showed a varicose vein draining into a pericranial

vein, both of small size and located on the scalp. The varicose vein was receiving venous blood from the superior sagittal sinus through a transosseous vein. We opted for conservative treatment considering the patient's age and the characteristics of the malformation. The lesion had regressed spontaneously and the patient is currently asymptomatic.

Sinus pericranii is considered a type of low flow vascular malformation. It occurs in close communication with the cranial vault and most frequently involves the superior sagittal sinus. Diagnosis is clinical, although it is confirmed with radiology. Accepted guidelines or recommendations concerning the management, diagnosis, and treatment of SP are still lacking. Most reported cases support conservative treatment, with treatment performed for aesthetic reasons only.

#### **P142- Atretic parietal cephalocele a case report**

*Omar Hattab, Haifa Mechergui - Fatma ben Atig - Alaa Belhaj - Khilil Ghdira - Bouali Soufien - Khansa Abderahmen - Jalel Kallel*

*National institute of neurology Tunis*

#### **Abstract :**

INTRODUCTION : Atretic cephaloceles represent 37% of all encephaloceles. It's a rare lesions that present as a painless subcutaneous swelling of the scalp, with fluid content and no hair. They are located in the midline

Patients and methods :

We report the case of a 1-year-old infant from a well-monitored pregnancy, delivered vaginally without complications. Good psychomotor development without macrocrania. Palpation of the scalp revealed a medial posterior parietal subcutaneous lesion, painless and fluid in consistency. The brain MRI shows a typical image of atretic cephalocele in communication with the quadrigeminal cistern associated with a persistence of the falxiform sinus.

DISCUSSION : Parietal atretic cephaloceles are rare variations of neural tube closure defects. They consist of a painless protrusion of the parietal scalp in the midline, denuded of hair, often with a subcutaneous fluid collection. They do not contain brain tissue, occasionally residual meningeal, glial or neuronal tissue may be found. Most cases remain asymptomatic and are discovered only after years or even in adulthood



due to an increase in size. MRI shows an upward deviation of the inferior longitudinal sinus with a channel filled with cerebral spinal fluid.

CONCLUSION : Atretic cephaloceles have a better prognosis than encephaloceles. The reference treatment is surgery. However, spontaneous involution without surgery has been described in the literature

### **P143- Intracranial hypotension in Marfan syndrome: a case report**

*Khansa Abderrahmen, Alaa Belhaj, Firas Sliti, Sofiene Bouali, Jalel Kallel  
service de Neurochirurgie - Institut de Neurologie de Tunis*

#### **Abstract :**

Marfan syndrome is an autosomal dominant, multi-systemic connective tissue disorder of different presentations. Dural ectasia, frequent in Marfan syndrome, is a predisposing cause of cerebrospinal fluid leakage with intracranial hypotension. We report the case of a 16-year-old girl who was admitted for a one-month history of severe orthostatic headache. Her pain relieved by lying in a horizontal position, usually within 15-30 minutes. The physical appearance of the patient was very suggestive of Marfan syndrome. Magnetic resonance imaging (MRI) of the brain revealed features of intracranial hypotension, while lumbar-spine MRI showed dural ectasia with a thecal sac dilation. Through this new case report, we aim to remember the MRI features of intracranial hypotension and its main etiologies. Making an early diagnosis of Marfan syndrome is crucial to prevent serious complications from this disease.

### **P144- Renier's H Technique for Scaphocephaly correction : About a surgical technique and literature Review**

*Mansour Wièm, Rihab Ben Fredj , Mahmoud Ben Messoud, Mohamed Chabaane  
,Hichem Ben Selma , Abdelmajid Mlaiki , Iadh Ksira  
CHU Sahloul - Sousse*

#### **Abstract :**

Introduction:

Calvarial sutures are formed during the embryonic development and later represent the major sites of bone expansion. Craniosynostosis is mainly explained by a

premature closure of one or more cranial sutures. It can be isolated or part of a polymalformative syndrome. Scaphocephaly remains the most common isolated single-suture synostosis accounting for 40% to 60 % of cases of craniosynostosis. It is secondary to a premature closure of the sagittal suture resulting in a narrow and elongated skull with reduced biparietal and bitemporal diameters. In advanced cases, it can result in brain damage with signs of intracranial hypertension, cognitive impairment and even epilepsy. These are the main reasons for which , craniosynostosis should be treated in early stages when they are severe or start being symptomatic. In this paper, we are going to talk about Renier's technique, developed in 1980, for scaphocephaly treatment.

Observation:

We report the case of a 7-months old baby, who was born with severe cranial bone deformity resulting in an elongated, narrow skull. Neurological examination upon admission showed no abnormalities. CT scan showed a scaphocephaly with no signs of brain damage. The patient underwent surgery using Renier's H and O technique. Post operative follow up was uneventful.

Conclusion:

Craniosynostosis is a rare craniofacial anomaly which may lead to various complications, deformations, and neurological impairment during the child's development.