



ORAL ABSTRACTS PUBLICATION



BEST ORAL ABSTRACT

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Category: Paediatric Neurosurgery

Non-Traumatic Spinal Cord Compression of The Child Multicentric Retrospective Study About 113 Cases In Senegal

Submission:

Introduction

No-traumatic spinal cord compressions aren't often described in children population. This study will discuss, the etiology, the therapeutic and evolutionary aspects in Senegal.

Methods:

113 children aged between 15 months and 18 years were managed in a 10 years period (from January 2005 To July 2015) for a no-traumatic spinal cord compression (average 8.3 years).

Results:

There was 66 males (58%) and 47 females (42%) with sex ratio of 1.40. 21 patients were performed The CT scan and 4 performed myelography. 22 patients were performed MRI. Dorsal lesions were majority (46%) Followed by the lumbar spine (27%). Pott's disease (80%) followed by tumors (17%) and spondylodiscitis to banal germs (2%) and parasitic spinal cord compression (1%).

Histology of 06 patients revealed neurofibroma Type II, extramedullary intradermal arachnoid cyst, intramedullary arachnoid cyst, Anaplastic pilocytic astrocytoma, ganglioneuroma I terminal cone meningotheial meningioma; 1 Histiocytic granuloma with caseous necrosis.

Pott's disease be cured by TB chemotherapy associated with a corset in 88.89% of cases, 2 Patients of this group had benefited osteosynthesis after laminectomy. 68% of the patients had a favorable recovery, and 20% had completely recovered after an average of 7 months of treatment and 3 Patients had died.

The compression by bilharzias is be cured by Myelotomy and praziquantel with a favorable outcome. We have 94.74% decompressive laminectomy or laminotomy with tumor resection and 4 Patients of this group benefited osteosynthesis; the patients who had intramedullary tumor benefited Myelotomy and tumor resection; 3 Patients in this group had benefited osteosynthesis after laminectomy 58% of patients had good recovery and 1pateint had died.

Conclusion:

In Africa, particularly in the tropics, Pott's disease remains the first etiology followed by vertebra-medullary tumors for no traumatic spinal cord compression of child.

Keywords: Spinal Compression, Child, Pott's disease, tumors, spondylitis, Bilharzia.



ABSTRACT 2

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Category: Neuro-oncology

Experience of Transsphenoidal Pituitary Surgery in Lagos, Nigeria

Submission:

Introduction

For many decades transnasal approaches to the sellar region did not gain much attention in Nigeria either due to lack of necessary equipment or lack of expertise in some cases. This is a prospective audit of Transnasal surgeries for pituitary macroadenoma in our centre, our experience so far and the lessons learned.

Methods:

An 8-year prospective evaluation of patients with pituitary lesions treated via transnasal route between February 2009 and January 2017 was carried out. Patients' demographics, clinical features, radiologic imaging and hormone assays were documented. The procedures (microscopic or endoscopic procedures based on size of lesions and choice of the surgeon), outcomes and complications were documented.

Results:

There were 88 cases of pituitary Macroadenoma, 42 of which were giant pituitary adenomas. Age range was from 24 to 76yrs. The major presenting features were visual impairment or total blindness, headaches, infertility and apoplexy. 32 patients underwent purely endoscopic procedures. The most common postoperative complication was transient diabetes insipidus. Other complications were headaches, transient cerebrospinal fluid leak in one patient, tension pneumocephalus, Subarachnoid haemorrhage, panhypopituitarism and death.

Conclusion:

Trans-sphenoidal approach is a safe and effective treatment for pituitary and other parasellar tumours. Considerable experience and expertise have become available in Nigeria to serve the West African region. Surgical complications in our series have been minimized after the first year. The adoption of a team approach in perioperative care has helped improve our outcome.



ABSTRACT 3

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Category: Trauma

Anterior Pituitary Hormonal Changes In Adult Patients With Moderate And Severe Traumatic Brain Injury

Submission:

Introduction

Traumatic brain injury constitutes a major health and socioeconomic problem throughout the world. Neuroendocrine dysfunctions have been a well-recognized complication of TBI with effects on overall clinical outcome. However, the prevalence of hormone derangement in TBI is poorly documented as the hormones are not routinely measured. The aim of this study was to determine the prevalence of anterior pituitary hormone derangement in moderate and severe TBI patients managed in our institution over a one-year period.

Methods:

The study was a prospective descriptive cross-sectional study carried out on 42 adult patients with moderate and severe TBI who presented within 24 hours of injury. Patients with pre-existing pituitary or psychiatric disorder, patients on any hormone replacement therapy and pregnant women were excluded. Venous blood samples were taken for anterior pituitary hormones analysis on admission, at 48 hours and at 1 week after the injury. Hormones were assayed using Microplate Immunoenzymometric assay technique (Monobind Inc. Lake Forest, CA 92630, USA) supplied by NUMS diagnostic Nigeria Ltd., Suleja, Nigeria. Data obtained was analyzed using SPSS version 20

Results:

All the patients except one (41, 97.6%) had abnormality in one or more anterior pituitary hormones at one point or the other. Twenty-two (52.4%) patients had abnormalities in more than three hormones the most common abnormality was found with ACTH (85.7% within 24hrs, 83.3% within 48hrs and 81% within 1 week) followed by LH (76.2% within 24hrs, 48.3% within 48hrs and 28.6% within 1 week) and prolactin (57.1% within 24hrs, 41.4% within 48hrs and 38.1% within 1 week). The least affected hormone was TSH.

Conclusion:

Anterior pituitary hormone derangement is a common abnormality in moderate and severe TBI. The ACTH, LH and prolactin are mostly affected during the acute phase of TBI.



ABSTRACT 4

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Presenter: Moaz Mohamed

Presenter Institute: National Center for Neurological Science

Category: General Neurosurgery

Spinal Schistosomiasis! Medical or Surgical Treatment

Submission:

Introduction

Spinal Schistosomiasis, although an unusual form of Schistosomiasis is an interesting type, this affect young individuals, producing a characteristic clinical features of cauda equina lesion of recent onset.

Methods:

This study was conducted from 1995-2009. All patients with diagnosis of spinal space occupying lesions with radiological features of spinal Schistosomiasis or histopathology came as spinal Schistosomiasis were included.

Results:

Ten patients satisfied the study criteria.

The age range was found to be from 6- 42 years, the mean age was found to be 19.7 years.

nine of the ten patients were males while only one is a female. M/F is 9/1. The patients' clinical picture was found to be the same. Backache, Lower extremities hypothesia, weakness and Urine Incontinence. the period of their symptoms ranged from 15-60 days.

Three of the patients were diagnosed by MRI which showed D 12 to L1 or L2 spinal cord swelling with hyper-intense patches in T2 images , while the remaining two patient were diagnosed by CT myelogram which showed D12 to L1 or L2 spinal cord intramedullary swelling.

In nine patients the diagnosis of cauda equina intramedullary tumor was put at first and all were treated by D11 to L1 Laminectomy and spinal cord biopsy. one patient was treated from the start by antibilharzial drugs.

In the nine patients treated by surgery the histopathology was schistosomal ovae and inflammatory cells.

All patient then received Praziquantel and corticosteroids and all of them showed improvement.

Conclusion:

1-Spinal Schistosomiasis is an interesting form of Schistosomiasis with characteristic clinical , radiological , and histopathological features.

2- The condition produce severe neurological disability with urine retention in relatively young individuals.

3- We advise trial of antibilharzial drug treatment and the surgical intervention to delayed for the refractory cases followed by administration of Praziquantel and Corticosteroids



ABSTRACT 5

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Category: Neuro-oncology

A Comparison of Microsurgical And Endoscopic Trans-sphenoidal Pituitary Adenoma Excision: A 7-year Retrospective Study

Submission:

Introduction

Trans-sphenoidal pituitary adenoma excision has been in practice over the years. Microsurgical approach is a well established procedure with good outcome. However, endoscopic method has shown to compare favourably with it and has continued to evolve.

Methods:

The data were collected from patients' case notes, hospital HMIS and the Unit's tumour register. It was analysed using SPSS version 20. Chi square was used to compare the safety profile and early outcome of the two common methods of pituitary adenoma excision. $P < 0.05$ was considered statistically significant.

Results:

Seventy consecutive patients' medical records were evaluated and analysed. 39(55.7%) patients were male while 31(44.3%) patients were female with a male to female ratio of 1.3:1. The age range was from 19-72 years with a mean age of 46.3 years. 46(65.7%) patients had microsurgical procedure while 24(34.3%) patients had endoscopic method. All the patients had macroadenoma except for three patients with microadenomas which were excised micro surgically. CSF leak was seen in 17.4% and 16.7% of microsurgical and endoscopic groups respectively (p value=0.94). Diabetes insipidus was found in 17.4% and 25% of the microsurgical and endoscopic methods respectively (p value=0.45). There was a satisfactory improvement in visual field defects (93.5%, microsurgical; 82.3%, endoscopic; p value=0.45). There was complete resolution of headache and no perioperative mortality in both groups.

Conclusion:

Trans-sphenoidal microscopic approach remains a well-established procedure. There is no significant difference in the safety profile and the early outcome in the two approaches. This study is being limited by being a one center study and we suggest that a multicenter comparative study should be conducted to validate the effectiveness of the approaches.



ABSTRACT 6

AUTHORS: ASHA, MA; OJO, OA

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Category: Epilepsy and Functional

Epilepsy surgery in a resource constrained setting: our initial experience

Submission:

Introduction

Epilepsy is a disorder of the central nervous system of various etiologies characterized by recurrent seizures due to excessive discharge of cerebral neurons. It is a chronic disorder with many complications. Typical management is medical. However, in medically refractive cases, surgery is helpful in selected patients. For optimum results, there is need for specialized epilepsy centers to be set up. This is lacking in our country at present. A total of 3 patients received surgical treatment in our center. In terms of epilepsy surgery, we are not aware of any documented series yet in Nigeria.

Methods:

The records of the three patients were operated on from 2014 to 2016 and followed-up for at least 18 months were retrieved and evaluated.

Results:

Two patients presented with drug-resistant while 1 patient presented with post traumatic lesional epilepsy. All the patients were treated surgically at our hospital over a two-year period (2014-2016). M/F ratio: 2/1. Mean age at surgery: 24 years. Seizure semiology was of partial seizure with secondary generalization in all of the patients. EEG abnormalities were ipsilateral to the epileptogenic lesion in all of them.

Temporal lobe involvement accounted for 2 of the cases and frontal lobe in 1. Histological findings were hippocampal sclerosis in 2 patients and cystic degeneration with surrounding gliosis in 1 patient. At follow-up, 2 patients were in Engel's class I while 1 patient was in class IIA.

Conclusion:

Epilepsy could be managed successfully with surgery in selected cases even in resource constrained settings. There is need for more awareness for the surgery of epilepsy and also establishment of Epilepsy treatment Centre.



ABSTRACT 7

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Category: Cerebrovascular

Profile of Anterior Circulation Intracranial Aneurysms and Outcome Of Surgical Treatment In Ibadan, Nigeria

Submission:

Introduction

There is a dearth of literature on the outcome of treatment of intracranial aneurysms in our sub-region. We describe the profile and outcome of the surgical management of Nigerian patients with anterior circulation intracranial aneurysms (ACIAs).

Methods:

A retrospective review of our experience with the surgical treatment of ACIAs from 2009-2018. Data were obtained from patients' case notes and registers from the clinic, ward and operation room. We described the dominant presentation, mode of diagnosis, and clinical outcome. The demographic, and clinic-radiologic data retrieved were analysed.

Results:

We managed 63 patients with angiographically confirmed ACIAs [2 (3.2%) asymptomatic and 61 (96.8%) symptomatic] during the study period. The age range was 22-76 years, the modal age interval being 50-69. The male:female ratio was 1:2.9. Posterior communicating aneurysms predominated the series accounting for 18 (28.6%), closely followed by anterior communicating and middle cerebral artery aneurysms which accounted for 13 (20.6%) and 11 (17.5%) cases respectively. Twenty four (38.1%) patients had clipping, 5 (7.9%) had wrapping, 23 (36.5%) patients either defaulted treatment or are awaiting surgery, 4 (6.4%) patients died preoperatively, 5 (7.9%) were referred for endovascular treatment, and 1 (1.6%) patient each had ventriculoperitoneal shunt and external ventricular drainage. Of those who had surgical intervention (31), followed up for one month to six years, 24 (77.4%) had good outcome, 3 (9.7%) had moderate disability, 1 (3.2%) had severe disability and 3 (9.7%) died postoperatively.

Conclusion:

The results of clipping (currently the only available surgical treatment modality at our centre) are good in this small series.



ABSTRACT 8

AUTHORS: BEN HAMOUDA, K

Author institutions/affiliations: Neuro Spinal Hospital Dubai

Category: Neuro-oncology

Brain Mapping and Awake Surgery in Gliomas: Experience With 12 Cases at The Neuro Spinal Hospital Dubai

Submission:

Introduction

Grade II to IV gliomas are infiltrating tumors, spreading into normal brain parenchyma. Their gross total resection implies resection of infiltrated brain parenchyma. This resection may be relatively safe in “silent” areas of the brain, but it carries a high risk of morbidity in eloquent areas, notably speech and motor areas. Direct cortical and subcortical stimulation, notably in awake patients, allows detection of these areas in order to preserve them if tumor resection could lead to severe neurological deficit.

Methods:

We report our initial experience with brain mapping in 12 patients with frontal, parietal and temporal gliomas. The patients were aged between 18 and 63 years. We performed positive mapping, which means identifying the eloquent areas before starting surgical resection. Mapping was on asleep patients in 5 cases, only for motor function. It was on awake patients in 7 cases. Up to three languages were mapped.

Results:

This technique allowed avoidance of permanent postoperative neurological deficit in all cases. We could perform gross total resection in 5 cases, subtotal or partial resection in 7 cases.

Conclusion:

Brain mapping is very useful tool to increase the safety of glioma surgeries. It allows performing more extensive resections when it is safe to do so and prevents from causing severe permanent motor or speech disturbances when eloquent areas are infiltrated.



ABSTRACT 9

AUTHORS: BEN HAMOUDA, K

Author institutions/affiliations: Neuro Spinal Hospital

Category: Neuro-oncology

Anterior Skull Base Meningiomas: Personal Series Of 38 Cases

Submission:

Introduction

Anterior Skull base meningiomas include Olfactory, planum sphenoidale and tuberculum sella meningiomas. A series of 38 cases is reported. Clinical and radiological presentation, surgical technique and results are presented and discussed.

Methods:

Operative findings and difficulties met during these surgeries are discussed. Approaches differed according to the site of insertion of the tumor and its size. Bifrontal, pterional, frontopterional and lateral supraorbital approaches were used. More posterior lesions required smaller approaches.

Results:

We deplore one death in the beginning of our experience. Since then, no mortality or severe permanent morbidity is deplored. Olfaction was preserved in some olfactory meningiomas. Vision recovered partially or completely in tuberculum sella meningiomas except for those with optic nerve atrophy. Surgical resection was complete in 32 cases. Small remnants mainly attached to anterior cerebral arteries (ACA) or their branches were left in 6 cases.

Conclusion:

Anterior skull base meningiomas remain challenging tumors requiring progressive and patient relaxation of the brain by progressive aspiration of CSF from the cisterns, with at the same time protection of the cisterns to avoid their flooding by blood which will cause brain swelling. Surgical debulking, then very thorough surgical dissection with preservation of the arachnoid planes and preservation of brain parenchyma, with keeping in mind that some vessels notably ACA may be encased by the tumor. Techniques have evolved, towards less invasive retractor less surgery with smaller bone flaps.



ABSTRACT 10

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Category: Trauma

Gunshot Wound Head Trauma in Chad: Study About 21 Cases

Submission:

Introduction

The management of ballistic cranial traumas knew a development with the advent of the neurosurgery to Chad. The aim of this study is to present the management of cranial wounded patients

Methods:

It's a prospective study going from December 2014 to April 2018. This study concerns all patients admitted in the service of neurosurgery of the hospital 'La renaissance'.

Results:

Over a period of 40 months, 21 ballistic cranial cases of trauma were taken in care in our institution. It was about 20 men. This trauma arose in a war context (terrorist attack) in 12 cases and the civil practice in 9 cases. The score of Glasgow varied from 5 to 15 at the admission. The entry zone was occipital in a case, at the vertex in 1 case, frontal bone in 12, and temporal in 9 cases. A leak of cerebro-spinal fluid was plentiful and noticed in 6 cases. All the patients benefited from brain CT scan which had objectified the missile. There had been a surgical abstention in 5 cases (23,8 %). The wound debridement was realized at all; As well as a systematic antibiotic treatment. A case of brain abscess was diagnosed during the evolution. No death was noticed. All the patients presented the post-traumatic stress disorder. Only two patients benefited from the psychiatric follow-up.

Conclusion:

The civil practice and that of the war increase the cranial ballistic wounds. The grave cases do not reach our structure. The brain CT scan is the top-grade examination; the antibiotic treatment is systematic. The post-traumatic stress disorder is objective syndrome of traumatized cranial is always present.



ABSTRACT 11

AUTHORS: MAHMUD, MR; YUSUF, AS; DALHAT, NK; ALFIN, JD; GANA, SI; TIMOTHY, S; ARUNA, AA; IDRIS, MM; ADEBIYI, J; OLAYIWOLA, A

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Presenter: Nasiru Kurfi Dalhat

Presenter Institute : National Hospital Abuja

Category: Trauma

Compliance to New Orleans criteria for cranial CT scan in mild traumatic brain injury at National Trauma Emergency Unit Abuja

Submission:

Introduction

Despite different evidenced-based guidelines for selecting patients with mild Traumatic Brain Injury (mTBI) for Computed Tomography (CT), there is still suboptimal compliance to these guidelines. CT scan overuse results to unnecessary patient's exposure to ionizing radiation and add extra cost to patients care. The aim of this study is to determine the level of compliance to New Orleans Criteria (NOC) for CT request in mTBI at the National Trauma Center Abuja.

Methods:

This is a retrospective review of all patients with mTBI that presented to Emergency Department of National Trauma center Abuja between January 2016 and December 2017. NOC was used to determine patients that met indication for cranial CT scan. The information was retrieved and analyzed using SPSS version 20.

Results:

A total of one hundred and eighteen patients with mTBI were analyzed with mean age of 27 year and male to female ratio of 4:1. Seventy-nine (66.9%) injuries result from road traffic crashes. Among 65 (55.1%) patients who met NOC, 41 (63.1%) had CT scan done while 25 (47.2%) patients in whom CT scan was not indicated had CT giving NOC compliance rate of 58.5%. The CT scan was normal in 34 (51.5%) patients. The abnormal CT findings were: 11 (16.7%) skull vault fracture; 2 (3.0%) basal skull fracture; 2 (3.0%) had EDH; 1 (1.5%) ASDH; 1 (1.5%) ICH; 8 (12.1%) contusions and 7 (10.6%) diffuse cerebral oedema. Only two patients had surgical intervention.

Conclusion:

The compliance for NOC guideline was below average in our Centre, hence there is a need for continuous education of emergency physicians to ensure better compliance.



ABSTRACT 12

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Category: Spine

CT assessment of the Craniocervical Junction: Normal Atlanto-Occipital Interval in adult Nigerians

Submission:

Introduction

Craniocervical dissociation injuries carry a high mortality if not promptly diagnosed and managed. The diagnosis is purely based on disruptions in anatomical relationships of structures in the CCJ. Of all the anatomical measurements in literature, the normal values of atlanto-occipital interval (AOI) is not well established in adults. The aim is to determine the normal values of AOI in adult Nigerians aged between 21 and 60 years, using MDCT and to determine racial, age and sex differences

Methods:

This was a one-year prospective cross-sectional study done at Memfys Hospital, Enugu. There were 240 subjects. Non-Nigerians and those with pre-existing CCJ abnormalities were excluded. Data were analyzed using descriptive and inferential statistics. Results were critically analyzed for possible sex and age variations and compared for racial differences with available literature.

Results:

The age range was 21 to 60 years. The measured normal values of AOI in adult Nigerians was 1.181 ± 0.018 . The values in the various age groups were 21 to 30 years: 1.279 ± 0.038 mm, 31 to 40 years: 1.164 ± 0.033 mm, 41 to 50 years : 1.151 ± 0.029 mm and 51 to 60 years : 1.174 ± 0.026 mm, ($p < 0.05$). The average normal value in males and females was 1.188 ± 0.025 mm and 1.174 ± 0.026 mm respectively. For the combined effect of age and sex on AOI values, $p = 0.568$. The values obtained were higher when compared with other races. The interobserver reliability test using the Cronbach's alpha was 0.938.

Conclusion:

AOI values in this study were higher than previous MDCT-based values in non-African populations. It decreased linearly with age and did not show any sex difference.



ABSTRACT 13

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Category: Trauma

Is Neuroendocrine DysFunction Following TBI Really Underdiagnosed?

Submission:

Introduction

Traumatic brain injury (TBI) is a major cause of death and disability worldwide. In Egypt moderate and severe TBI represents 17.2% of presenting cases (2). The frequency of hypopituitarism after TBI varies widely among different studies (15–50% of the patients with TBI in most studies (1).

Methods:

cross sectional study with stratified random sample of 107 patients admitted in Cairo university hospitals before March 2017 .

Hormonal Assay level was used to detect Hormonal deficiency.

Serum ACTH, Morning Cortisol , TSH , LH, FSH, GH and IGF-1 were measured are stratified according to matching Age and sex.

Results:

Out of the 107 included in the study 20 patients (18.7%) were found to have Neuroendocrine Dysfunction ; 10 patients(9%) have GH deficiency, 5 patients (4.7%) with ACTH / cortisol deficiency, 3 patients (2.8%) with LH deficiency and 2 patients (1.9 %) with TSH deficiency.

Overall age ranged from 2.5 years to 31 years with a mean age 12.1 years \pm 7.74 Years. 72 patients (67.3%) were males and 35 patients (32.7%) were females.

Out from 20 patients that have NED, 6 patients (30%) had severe head ,5 patients (25%) had moderate head injury and 9 patients (45 %) had mild head injury. Out of 20 patients that have NED 5 patients (25%) underwent conservative treatment and 15 patients (75%) underwent neurosurgical intervention.

Conclusion:

Neuroendocrine Dysfunction is one of the long-term sequelae of Traumatic Brain injury. Many patients are under-diagnosed because symptoms of mild hypopituitarism are slowly developing. Growth Hormone Deficiency (GHD) is the most frequent anterior pituitary hormone deficiency in patients who have sustained TBI. It should not be underestimated because hormonal abnormalities may contribute to a diminished quality of life.



ABSTRACT 14

AUTHORS: ESENE, I

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Category: Spine

Diagnostic Performance of The Medial Hamstring Reflex In L5 Radiculopathy

Submission:

Introduction

An avalanche of literature exists on almost every aspect of lumbar disc pathology but very limited studies have quantified the diagnostic performance of elements of clinical examination in predicting disc level, meticulously collated the reflex changes in lumbar disc herniation (LDH) as well as assessed the diagnostic performance of the medial hamstring reflex (MHR).

Our study underscores the diagnostic performance of the MHR in L5 radiculopathy (commonest radiculopathy) comparing its diagnostic power to that of the knee and ankle reflexes.

Methods:

One hundred consecutive patients operated for de novo LDH in our department between January and December 2011 were prospectively followed-up. A nested case control study was designed from our cohort to assess the performance of the MHR in L5 sciatica. All patients were examined by two independent examiners pre-operatively for the MHR and the results collated and correlated to MRI and intraoperative findings.

Results:

The MHR has a diagnostic performance intermediate to that of knee and ankle reflexes. The percentages correctly classified were respectively: 86%, 79% and 67% for the knee, MHR and ankle reflexes. The MHR is highly precise with an intra-rater reliability of 100% and inter-rater repeatability of above 90% and test-retest reproducibility of 100%.

Conclusion:

The MHR hitherto described as elusive has a high diagnostic performance and is a valid neurologic test that should be included in the routine neurologic examination of patients with suspected L5 radiculopathy.



ABSTRACT 15

AUTHORS: ESENE, I; MBUAGBAW, L; DECHAMBENOIT, G; KALANGU, K; DEMPSEY, R

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Category: General Neurosurgery

Current Challenges with Research Methods in Neurosurgery. Now Is the Time for A Change!

Submission:

Introduction

Research Methods in Neurosurgery have come to a historical crossroads. In recent years, we with other authors have scrutinized the quality of clinical research in neurosurgery in an attempt to quantify quality deficiencies. The results revealed that despite marked improvement over time, the quality of research remains poor with serious deficiencies in study designs, statistical methods and quality of reporting.

Herein, we rigorously analyze key problems related to the quality of methodology and reporting across commonly encountered clinical study designs in Neurosurgery.

Methods:

We performed a scoping analysis to map the evidence evaluating the quality of neurosurgical research and the uptake and impact of guidelines on quality.

Results:

Serious deficiencies in study designs, statistical methods and quality of reporting across all study designs in Neurosurgery. Considerable misunderstanding of research terminologies in neurosurgery research.

Neurosurgery has the worst quality of metaanalyses (MA) compared to other specialties and Close to 30% of MA in Neurosurgery, do not meet the basic definition of a MA.

Forty-eight percent of Randomized Controlled Trials in Neurosurgery are of "bad-to-moderate" quality.

Above 50% of studies claiming to be case control studies are a misclassification, most are cohort studies.

About 70% of self-acclaimed Case Series are a mislabeling; more than 50 % are descriptive cohorts.

There is significant confusion in demarcating case reports from case series; 20% of studies presented as case series are case reports.

There is a general Lack of adherence to methodological and reporting guidelines in neurosurgery research.

There is Significant downgrading of evidence in neurosurgical literature.

Conclusion:

In a domain like neurosurgery where errors are intolerable, there should be a strong emphasis on the quality of methodology and reporting of research findings.



ABSTRACT 17

AUTHORS: GAROZZO, D

Author institutions/affiliations: Neurospinal Hospital, Dubai

Category: Trauma

Indication for Surgery and Outcome in Brachial Plexus Injuries: Our Experience

Submission:

Introduction

Brachial plexus injuries (BPI) are traction injuries mostly occurring in motorcycle accidents: they usually affect young males between 15 and 35 years of age. The vast majority of these patients harbors devastating lesions with no potential for recovery unless they are surgically treated.

The Author presents her experience in the surgical treatment of over 600 BPI in adults.

Methods:

A retrospective analysis of the series of the Author is presented, illustrating the clinical and diagnostic assessment, the criteria for surgical indication and the repair strategy (graft reconstruction and /or nerve transfers) according to the injury pattern and surgical findings.

Outcome was evaluated after at least 2 year follow up.

Results:

Concerning supraclavicular injuries, surgical outcome for partial injuries was favorable. In upper BPI, valid shoulder and elbow function were restored in 90% of cases, regardless the presence of avulsions.

In total palsies with multiple avulsions, shoulder and elbow function were restored in 40 % of complete injuries; restoration of a valid hand function was not achieved.

In Infraclavicular injuries, outcome proved favorable when micro reconstruction was performed on the lateral and or posterior cord, medial cord repair was not satisfactory.

Conclusion:

Surgical treatment of brachial plexus injuries must be certainly encouraged as it proves to be rewarding, especially nowadays after the introduction of new techniques (nerve transfers). In partial supraclavicular and infraclavicular lesions, at present surgery is able to restore a valid function, thus providing excellent results and rescuing these young individuals from disability.

In complete injuries with flail arm, it must be admitted that surgery is often a salvage-like procedure: although the restoration of a valid function in shoulder and arm proves to be beneficial for the patient, the impossibility to regain hand function still makes these injuries severely invalidating even in those cases with favorable outcome.



ABSTRACT 18

AUTHORS: GAROZZO, D

Author institutions/affiliations: Neurospinal Hospital, Dubai

Category: Trauma

Common Peroneal Nerve Injuries: Indications for Surgery and Repair Strategies

Submission:

Introduction

Common peroneal nerve injuries (CPNI) are the most frequent nerve lesions of the lower limb, due its anatomical peculiarities.

The Author presents her experience in the management and surgical treatment of CPNI

Methods:

A retrospective analysis of the surgical series of the Author is discussed evaluating the causative mechanisms, indication for surgery and the procedures performed. Surgery included 3 possible options according to the referral time to the surgeon after the trauma. Patients referred within one/one and a half year from the traumatic event were submitted to exploration and nerve repair or exploration and nerve repair in association with a tibialis tendon transfer.

When exploration revealed injuries requiring a graft longer than 12 cm, in long dating injuries or CPNI consequent to ankle sprains, tibialis tendon transfer was the procedure of choice.

Results:

Surgical outcome was evaluated after at least a 2 year follow up. In patients that were referred within one year from the traumatic event, nerve repair provided satisfactory surgical outcome when the graft repair was shorter than 6 cm.

In patients submitted to nerve repair in association with the palliative procedure, the causative mechanism clearly affected the outcome: CPNI due to a knee dislocation or stab wounds present excellent recovery but injuries due to fractures, iatrogenic injuries and gunshots had a less favorable outcome.

TA always recovered earlier whereas ECD and EPA recovery appeared later and was less constant.

Conclusion:

In CPNI, indication for surgery and the type of procedure depend on the analysis of multiple factors such as the timing of the surgery, the causative mechanism and the damage sustained by the nerve. Although just a tendon transfer alone is advocated by many surgeons, whenever possible, nerve repair is worthy to be performed as it allows to restore toe function and sensory recovery as well.



ABSTRACT 19

AUTHORS: GUGA, D; ONYIA, E; OKORIE, E; ILOABACHIE, I; UCHE, E; CHIKANI, M; MEZUE, W

Author institutions/affiliations: University of Nigeria Teaching Hospital, Enugu; University of Nigeria Teaching Hospital, Enugu / Federal Medical Centre, Umuahia; Federal Medical Centre, Umuahia; University of Nigeria Teaching Hospital, Enugu; University of Nigeria Teaching Hospital, Enugu / Federal Medical Centre, Umuahia; University of Nigeria Teaching Hospital, Enugu; University of Nigeria Teaching Hospital, Enugu

Category: General Neurosurgery

Cranial Defect Reconstruction: Experience from Two Centers In Southeast Nigeria

Submission:

Introduction

Cranioplasty has undergone significant evolution from ancient times to date. A wide range of materials have been used for this procedure, from obsolete items like gourds and fruit shells to sophisticated constructs such as computer-generated craniotomy covers. In settings where resources are scarce, the choice of material for cranioplasty is influenced not only by the surgical indication or surgeon's experience, but also by cost. This study highlights our experience with this reconstructive procedure in a resource-limited setting.

Methods:

A 7-year retrospective study of patients who had cranioplasty at two tertiary health institutions in Southeast Nigeria - University of Nigeria Teaching Hospital, Enugu and Federal Medical Centre, Umuahia. Relevant data were obtained from patients' clinical records and analyzed.

Results:

Of the 37 patients managed with cranial defects over the study period, 20 underwent cranioplasty (15 male, 5 female). Their ages ranged from 9 to 67 years (mean = 32.5). The calvarial defects resulted from decompressive craniectomy for trauma (14/20), brain tumour excision (5/20) and frontal mucocele excision (1/20). Latency to repair ranged from primary cranioplasty to 13 months.

The most utilized material was autologous bone flap, which had been stored in a subcutaneous abdominal wall pouch in 14 patients and in a subgaleal pouch in 1 patient. The remaining 5 cranioplasties were done using synthetic bone substitutes - methyl methacrylate and titanium mesh.

Partial bone resorption occurred in all cases of autologous cranioplasty, but only one of them warranted re-operation due to concerns about cosmesis. One case of infection occurred with methyl methacrylate. There was no mortality.

Conclusion

Autologous cranioplasty is the commonest form of reconstruction for cranial defects in Southeast Nigeria, most of which are from decompressive craniectomy for trauma. It is favoured because of its ideal properties and the cost of synthetic alternatives. The outcome is good.



ABSTRACT 20

AUTHORS: HASSAN, H; KHALLAF, M; ELKHAYAT, R

Author institutions/affiliations: lecturer of neurosurgery; Assiut university neurosurgery department; Assiut university neurosurgery department

Category: Spine

Evaluation of Treatment of Recurrent Lumbar Disc Prolapse: Fusion Versus Non-Fusion

Submission:

Introduction

Recurrent lumbar disc herniation is one of the most common spinal disorders. The management of recurrent lumbar disc herniation remains somewhat controversial. Surgical treatment for recurrent disc herniation can be broadly categorized as revision discectomy alone or revision discectomy and fusion.

Methods:

This is a prospective, randomized, comparative study on 30 patients (19 M, 11 F) with recurrent lumbar disc herniation at Assiut University Hospitals from January 2015 to January 2016 (minimum 12-months follow-up) with an average age of 47.2 years (range: 30–67 years). The patients were classified into 2 groups: Group A (15 patients); who had revision discectomy alone, group B (15 patients); who had revision discectomy with fusion. The clinical and radiographic results were compared between the two groups.

Results:

Regarding postoperative Modified MacNab's Criteria, there is no significant difference ($P=0.7826$) between group A which was excellent in 7 cases (7/15, 46.7%), good in 6 cases (6/15, 40%) and fair in 2 cases (2/15, 13.3%) and group B which was excellent in 6 cases (6/15, 40%), good in 6 cases (6/15, 40%), fair in 2 cases (2/15, 13.3%) and poor in 1 case (1/15, 6.7%). In group A: 1 of 15 patients (6.7%) had Dural tear while in group B: 3 of 15 patients (33.3%) have dural tear ($P=0.6171$) and no infection occur in group A while 2 patients (13.3%) have infection in group B. The intraoperative blood loss and length of operation were significantly less in group A. The post-surgery hospital stay was significantly different between the 2 groups, being least in group A and highest in group B

Conclusion:

Surgery for recurrent lumbar disc herniation can be very successful and may approach the success rate for initial operations (80% in our study) provided proper patient selection, good and thorough examination and investigations and proper surgical technique.



ABSTRACT 21

AUTHORS: IBRAHIM, A; BENNAFAA, T; ABDERAHMANE, SS

Author institutions/affiliations: CHU BEO ALGIERS; CHU BEO ALGIERS; CHU BEO ALGIERS

Category: Neuro-oncology

Surgical Management of Cushing Disease and Predictors Factors of Remission

Submission:

Introduction

Cushing's disease is chronic hyper-secretion of cortisolemia related to a pituitary adenoma. Complications of Cushing's Disease Require Early and Effective Treatment:

Methods:

We reported all patients presented for Cushing disease in the neuro surgery department of CHU Bab El Oued Algiers from November 2015 to March 2018. We performed brain MRI for all patients and we operated them through trans-sphenoidal endoscopy

Results:

Trans-sphenoidal surgery remains the reference treatment whose remission represents 69 - 94% of cases .There is no consensus on the criteria for postoperative remission, but in practice, operative ascertainment, clinical signs and postoperative biological and biochemical assessment are predictive factors for remission

Conclusion:

The management of Cushing disease need a multidisciplinary collaboration. Of which the treatment of choice remains the selective resection of the micro adenoma, it is necessary to promote the repeat surgical procedure in case of failure of the first intervention.

Endoscopy and the use of neuro-navigation facilitates the surgical procedure, improves the quality of excision and shortens the operating time



ABSTRACT 22

AUTHORS: INOJIE, M; NDUBUISI, C; OKHUELEIGBE, M; MEZUE, W; OHAEBULAM, S

Author institutions/affiliations : Memfys Hospital for Neurosurgery, Enugu / Federal Medical Centre, Asaba; Memfys Hospital For Neurosurgery, Enugu.; Memfys Hospital For Neurosurgery, Enugu; University of Nigeria Teaching Hospital, Enugu.; Memfys Hospital For Neurosurgery, Enugu

Category: Spine

The Diagnostic Value of MRI Derived Space Available for The Spinal Cord (SAC) In Predicting The Risk of Subaxial Cervical Spinal Cord Injury

Submission:

Introduction

Space available for the spinal cord (SAC) is a measure of cord functional reserves. Reduction in SAC value may predispose to cord injury. This study assessed the accuracy of MRI derived SAC in predicting the risk of spinal cord injury by comparing the subaxial cervical spine SAC values obtained in asymptomatic Nigerians and those with traumatic cervical spine cord injury (CSCI).

Methods:

Prospective, cross-sectional MRI-based study of selected 100 consenting asymptomatic adults and 88 CSCI patients done in Memfys Hospital from 2012 to 2017. SAC was calculated by subtracting disc level midsagittal cord dimension from corresponding level spinal canal dimension. Age range was between 21 to 50yrs. Data was analyzed using inferential and descriptive statistics.

Results:

Average SAC value for each disc level for asymptomatic and those with CSCI were: C3/4 (4.9 + 1.2mm, 2.5 +/-1.7 mm), C4/5 (4.5+/-1.0mm, 2.2+/-1.4mm), C5/6 (4.7+/-1.0mm, 2.3+/-1.6mm), C6/7 (5.1+/-1.1mm, 2.7+/-1.9mm), C7/T1 (5.7 +/-1.2mm, 4.2+/-1.9mm). There was a statistically significant difference of SAC at each disc level between the two groups ($P < 0.05$), especially at C4/5 and C5/6. Frequencies of cord injury level were: 43.2% (C5/6), 28.4% (C4/5), 17.1% (C6/7), 5.7% (C3/4), 3.4% (C7/T1), 2.2(C2/3). Using the calculated mean SAC size for asymptomatic individual for each disc level, the risk of CSCI will increase if the SAC size is less than the mean value [sensitivity 93%, Negative Predictive Value (NPV) 90%].

Conclusion:

The SAC is significantly lower in the CSCI group and this may be the anatomical basis of cord injury in these individuals following trauma. C4/5 and C5/6 have the most significant difference in SAC between both groups and this correlated with high frequency of occurrence of CSCI recorded at these levels. SAC has a high sensitivity and NPV in predicting the risk of subaxial CSCI.

Key words:

SAC, Asymptomatic, Nigerians, Spinal cord injury, Sensitivity



ABSTRACT 23

AUTHORS: IROEGBU EMERUEM, L

Author institutions/affiliations: N/A

Category: Cerebrovascular

Completeness of The Arterial Circle of Willis In Nigerians-A CTA-based Study

Submission:

Introduction

The circle of Willis is an anastomotic polygon located at the interpeduncular fossa that ensures continued supply to vital nervous tissues, in the event of cerebral artery occlusion. It has been extensively studied internationally, in terms of completeness, but no local data exists in our environment. The aim of this study was to assess for completeness of the anterior and posterior components of circle of Willis in adult Nigerians 18 years and above.

Methods:

This was a one- year prospective cross- sectional computed tomography angiography- based study between January 2017 and December 2017; focusing on the anatomy of the circle of Willis in terms of completeness in adults 18 years and above, who met the criteria for the study. The data obtained was analyzed.

Results:

There were a total of 94 subjects analyzed, 56 males and 38 females. Complete circles were identified and reported as Type I, which constituted 63% of the study; Type II, with a complete anterior, but an incomplete posterior component constituted 23%; Type III, with a complete posterior and an incomplete anterior component made up 10% and Type IV, in which both the anterior and posterior components of the circle were lacking, was 4%.

Conclusion:

This study reveals that there are a significant number of people in our environment with an incomplete circle of Willis. These are of great clinical significance, especially as vascular procedures become more common in our environment, because these individuals lack collateral blood supply to vital neural tissues and are of increased risk of catastrophic events in the event of cerebrovascular insult.



ABSTRACT 24

AUTHORS: JOKONYA, L

Author institutions/affiliations: University of Zimbabwe

Category: Neuro-oncology

Prevalence of Human Immunodeficiency Virus Infection in Brain Glioma Patients: Is the Virus Protective From Gliomas?

Submission:

Introduction

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) is associated with an increased prevalence of some malignancies. However, some observational studies have revealed an ever-decreasing prevalence of HIV in glioma patients. The relationship between HIV and brain gliomas has not been well established.

Methods:

A cross-sectional study was carried out in Sub-Sahara Africa; a high HIV prevalence setting, to determine the prevalence of HIV amongst all glioma patients over a two-year period.

Results:

A markedly reduced prevalence of HIV was found in glioma patients (8.3%) in comparison to the general population (14.3%). The “anti-glioma effect” of HIV and/or its treatment resulted in a 42% decrease in glioma occurrence in HIV positive patients compared to HIV negative individuals. Age and sex adjusted prevalence were also lower amongst glioma patients with the protective effect observed more in younger patients and female sex.

Conclusion:

Our results corroborate the protective effect of HIV positivity vis-à-vis gliomas. This “anti-glioma effect” could be attributed to either the HIV, its treatment or both. Future studies focused on this “effect” may help unveil better preventative and possible therapeutic avenues for gliomas.



ABSTRACT 25

AUTHORS: JOLAYEMI, EO; BANKOLE, OB; KANU, OO; OJO, OA; OLUFOWOBI, AA

Author institutions/affiliations: Lagos University Teaching Hospital, Idi araba; Lagos University Teaching Hospital, Idi araba.

Category: General Neurosurgery

Bone Flap Cryopreservation, Autologous Re- Implantation Cranioplasty and outcomes following Decompressive Craniectomies in Lagos, Nigeria

Submission:

Introduction

Decompressive craniectomy (DC) is part of the armamentarium for the management of refractory intracranial hypertension. Post- procedural mortality as high as 65% has been documented.

Advancements in neurosurgical techniques and neuro- intensive care have ensured more survivors of DC in our environment, thus bringing to the fore, the challenges of cranial flap preservation and cranioplasty.

Methods:

The case records of patients who had DC for all indications between September 2015 and February 2018 at the Lagos University Teaching Hospital were reviewed. Information on demographics, neuroimaging, DC indications, duration from DC to re- implantation cranioplasty and surgery outcomes were retrieved.

Results:

Fifty- three patients had DC. The male to female ratio was 3.42: 1 with a mean age of 41.51 ± 18.61 years and ages ranging from 4 to 80 years.

Twenty- four (45.3%) of the patients survived. Post- DC complications encountered were SSIs, syndrome of the trephined and hydrocephalus.

Nineteen patients had autologous re- implantation cranioplasty. The average duration from DC to cranioplasty was 78.84 ± 50.04 days with a range of 12 to 203 days.

Post- cranioplasty complications included bone flap resorption and SSIs.

Conclusion:

We describe a simple, inexpensive method of bone flap preservation after DC. The bone flaps were preserved by submersion in gentamicin- laced physiologic saline solution, enclosed in plastic intravenous fluid bottles and stored in the freezer compartments of a designated refrigerator in the operating complex.

DC remains an invaluable tool in the management of refractory intracranial hypertension. Our method of bone preservation appears to yield acceptable outcomes. There are limited options of allograft replacement for craniectomy defects in our setting, hence the need to preserve the native bone at all cost.



ABSTRACT 26

AUTHORS: KALANGU, K

Author institutions/affiliations: University of Zimbabwe

Category: General Neurosurgery

The Importance of Adapting the Aviation Check List Into OR

Submission:

Introduction

Generations of engineers have made flying in airplane the safest transport mode. They learned a lot from disasters which occurred in the past and came up with one of the most efficient tool called "Check List"

We adapted this tool in the OR in two institutions and we are now showing our results.

Case:

a check list was introduced into two institutions in Harare, Zimbabwe. Doctors and nurses were trained for the purpose. The protocol was followed religiously in the private institution and the process was discontinued in the public hospital

Discussion:

it was so easy to demonstrate how all operations were carried out in the private hospital and often postponed in the public institution. The cancelation was due to lack of the required instruments for the operation, dysfunctional machines and lack of some consumables.

The author demonstrates further how all these problems could have been solved if the check list method was applied.



ABSTRACT 27

AUTHORS: KOUAKOU, LFA

Author institutions/affiliations: N/A

Category: General Neurosurgery

Monoparesis Secondary to Spinal Cord Toxoplasmosis: A Rare Mode of Revelation Of Acquired Immunodeficiency Syndrome; A Case Report

Submission:

Introduction

Toxoplasmosis is an opportunistic parasitary infection that affects people with altered immune defense. We report a rare case of AIDS revealing a spinal cord toxoplasmosis in order to discuss its management.

Case:

It's a 53 years old man with no medical history admitted for a right leg monoparesis. He was complaining for at least 3 weeks. He had no weight loss, no weakness and no fever. An RMI showed a spinal cord ring-enhancing lesion; the CD4+ lymphocytes count was 100/ml. An HIV test was positive. So, the patient received anti toxoplasma treatment. One week after, he died because of a severe sepsis.

Discussion:

Toxoplasmosis is secondary to *Toxoplasma gondii*: a parasite that lives in animals. Humans are contaminated when they eat or touch infected animals. In immunocompetent persons there is no danger. However, those who suffer from AIDS are fragile and vulnerable.

Spinal cord lesion can reveal AIDS. When a person, not known to have HIV-AIDS, is discovered with medullary lesion that leads a suspicion of toxoplasmosis: it urges to make AIDS diagnosis and start medical treatment immediately. Generally, clinical improvement appears in the first week. If the patient receives adequate drugs during 2 weeks and does not show improvement: a biopsy must be performed to confirm toxoplasmosis diagnosis.



ABSTRACT 28

AUTHORS: LABEODAN, O

Author institutions/affiliations: Mpumalanga Health Department

Category: Paediatric Neurosurgery

Large Brain Masses in Children 3years And Below. An Experience Over 3 Year Period In Semi Urban Practice In South Africa

Submission:

Introduction

Childhood brain malignancies are uncommon especially in children less than three years of age. The delayed presentation of these children is almost the norm in the semi urban practice. The varied clinical presentation is remarkable. Large masses measuring more than 2cm in diameter in any child can be devastating on the eventual development of the brain.

Methods:

Retrospective analysis of the clinicopathologic pattern of large brain masses in children less than three years of age was done. The clinical presentation and surgical management analysed. The total number of brain tumours surgically treated was determined for the period of study between January 2014 and December 2016. They all had their surgical evacuation of the masses that were causing symptoms or mass effect and mid line shift. The surgical and perioperative care were analysed. The follow up period of 1 years was done on surviving children was done and factors affecting their eventual outcome postulated.

Results:

A total of 103 brain tumours were operated on in the period of the study. 7 children less than 3 years were included. The youngest child in the group was only one week old. The clinical presentation varied from that of enlarging head circumference, failure to thrive, focal neurological deficit to alteration n level of consciousness. The children all had masses which were more than 20% of the estimated intracranial space and the largest mass measured 6cm in its widest diameter. The masses were located supratentorially in 5 patients and infratentorial in 2. The histologies were all mitotic and mostly aggressive nature.

Conclusion:

Careful consideration must be done in this group of children. The late presentation in moribund state may preclude radical surgery. The surgical planning must take into consideration the possible histopathology and vascularity of the tumours and 2 stage surgery may be advantageous in some patients



ABSTRACT 29

AUTHORS: MATHEW , M; MEHER, SK; UCHE, E; CHIKANI, MC; BASU, S; JAIN, H; TRIPATHY, L; ME-ZUE, WC

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Category: Neuro-oncology

Surgical Management and early outcome of Spinal Schwannomas

Submission:

Introduction

Primary Spinal cord tumours are less common than their cranial counterparts. This study uniquely focuses on clinical profile and determinants of surgical outcome of spinal schwannomas in a developing country.

Methods:

Retrospective review of histologically diagnosed spinal schwannomas managed at Medica superspecialty hospital, Kolkata over a 6-year period was done. Data was analyzed using SPSS for Windows, version 21. A p value of < 0.05 was considered significant for associations.

Results:

Out of 91 histologically diagnosed primary spinal cord tumours managed, 39 (42.9%) were schwannomas. Of these, 26 (66.7%) were males and 13 (33.3%) were females giving a male-female ratio of 2:1. The age ranged between 23-80 years with a mean age of 53.08 ± 14.4 . Peak incidence of was seen in the 41-50 age group (30.8%). Pain, motor symptoms, and abnormal deep tendon reflexes were the most common clinical features seen in 69.2%, 58.3%, and 43.5% respectively. Most lesions involved the thoracic spine (53.9%), mainly in the IDEM (74.4%), solid in consistency (92.3%), and solitary (97.4%), and spanned through 2 or more vertebral bodies (69.2%). Pre-op functional grading was Frankel B 5.4%, C in 18.9%, D in 21.6%, and E in 51.4% of patients.

Gross total resection was achieved in 89.7%. At discharge, 24 patients (61.5%) improved while 12 (30.8%) had no change in neurology. Outcome was independent of number of vertebra involved ($p = 1$), sphincteric dysfunction ($p = 0.6639$), and extent of tumour resection ($p = 0.6079$). Good functional grading (Frankel D & E) improved from 86.1% at discharge to 96% on follow up. Transient CSF leak was the most common complication seen in 2 patients. The average time spent on admission was $7.9 \text{ days} \pm 5$. No peri-operative mortality.

Conclusion:

Schwannomas are predominantly solid lesions commonly located in the thoracic spine and presenting mainly with pain. Microsurgical excision offers good outcome.



ABSTRACT 30

AUTHORS: MOHAMED, M; AHMED, A; AHMED, M

Author institutions/affiliations: National Center for Neurological Science; Mawada Hospital; National Center for Neurological Science

Presenter: Abubakr Ahmed

Presenter Institute : Mawada Hospital

Category: General Neurosurgery

Brain Tuberculosis the Vision Of Neurosurgeons

Submission:

Introduction

Tuberculosis is an infectious disease that is frequently seen in developing countries. But nowadays it is also seen in developed countries associated with increased incidence of HIV. Cerebral tuberculosis represents 10% of all extra pulmonary TB.

Methods:

This study was conducted from 2009-2017. 23 patients of cerebral tuberculosis were seen. The diagnosis was made after history, and examination and investigations utilizing MRI of the brain, ESR and PCR.

Results:

16 patients were males, 7 were females. Age ranged from 7-77 years. The mean age was 37.78 year, the symptoms were vomiting in 74% of the patients, headache in 70 % of the patients, limbs weakness in 70% of the patients, visual disturbances in 65% of the patients, seizures in 45% of the patients disturbed consciousness in 22% of the patients beside other symptoms like neck pain, fever and others. The duration of symptoms were ranging from 15 days to 1 year. The MRI and CT scan showed features of SOL lesions, ESR was high in most patients and PCR was negative in 50% of the patients, 22 patients 96% were treated by antitubercular chemotherapy, in one patient the surgical intervention was immediately executed because of behavior of the tuberculoma like a tumor. The majority of the patients were either improved or cured after application of the specific protocol of management (81%). Other patients either remained static, deteriorated or died (19%), this represents patients who presented late.

Conclusion:

The prime management of cerebral tuberculosis is antitubercular chemotherapy. The role of surgery is limited to so strict specific conditions. In case of high suspicion of neoplastic condition, it is better to resort to surgery. If there is any possibility to have histological diagnosis during surgery, it is better to limit the surgical excision to maximum resection with respect to normal or inflamed brain tissue.



ABSTRACT 31

AUTHORS: MOHAMED, M; AHMED, A; AHMED, M

Author institutions/affiliations: National Center for Neurological Science; Mawada Hospital; National Center for Neurological Science

Presenter: Abubakr Ahmed

Presenter Institute : Mawada Hospital

Category: Spine

Functional Evaluation of Patients With Lumbosacral Disc Prolapse After Endoscopic Discectomy

Submission:

Introduction

Lumber disc prolapse is a very common neurosurgical problem in many instances it needs surgical interventions, the traditional surgical procedures as associated with so much drawback like long recovery period, the need of large quantities of drugs like antibiotics, analgesics and sometime the need for blood transfusion.

Methods:

43 patients, were operated upon by endoscopic lumbar discectomy from 2007-2017. The score of the Japanese Orthopedic Association (JOA) for a Patient with Lumbar Disc Herniation was utilized to assess patients pre and post operatively.

Results:

Thirty patient were males (69.8%), 13 patients (30.2%) were females. Age ranged between. 16-86 years, with the mean of age of 41.88 years. Their presentation includes Backache 37 (86%), lower extremities pain in 43 (100%), lower extremities weakness in 33 patients (81.4%), Sensory disturbance in 40 patients (93%), Sphincter Disturbances in 3 patients (9.3%) and Gait problems were encountered in 30 patients (85.3%). Lumbosacral MRI was performed as investigative imaging tool. Interlaminar approach was utilized in all patients, In 24 patients (55.8%) only prolapsed discs was found. In 18 patients (41.8%) discs and associated hypertrophied ligamenta flava were found. Only one patient (2.3%) had bony canal stenosis. Post operatively 23 patients (53.5%) were cured. 18 patients, (44.2%) were improved. one patient remained static. Redo surgery was resorted to in six patients (14%). Complications encountered included wound infection in two patients (4.7%) (8), incidental duraotomy with CSF leak in four patients (9.3%). Lower limb weakness 6 (14%) Three patient (7%) one patient (2.3%) was complicated with root injury.

Conclusion:

Successful results can be achieved in majority of the patients. The Japanese orthopedics association score for assessment of lumbar spine endoscopic surgery was found to be a reliable method for assessing lumbar discs patients both pre and post-operatively so we advise to adopt this scale for wide use.



ABSTRACT 32

AUTHORS: MORGAN , E; BANKOLE, F

Author institutions/affiliations: IRRUA SPECIALIST TEACHING HOSPITAL/AMBROSE ALLI UNIVERSITY; Lagos University teaching Hospital/University of Lagos

Category: Trauma

Comparison of The Predictive Strength of Total White Blood Cell Count Within 24 Hours On Outcome Of Traumatic Brain Injury With Glasgow Coma Score And Pupillary Reactivity

Submission:

Introduction

Clinical parameters such as Glasgow coma scale (GCS) and pupillary reactivity (PR) have been identified as useful indicators for predicting traumatic brain injury. Total white blood cell (WBC) count is a laboratory test whose role in predicting TBI is still at low ebb. Total white blood cell count have been known to be elevated due to varied reasons in traumatic brain injury (TBI) and this have been found to correlate with poor outcome. Our study aimed to establish if the predictive strength of total WBC count can be compared with other known outcome model such as GCS score and PR

Methods:

This research was done as a hospital based prospective study of 158 patients who presented with isolated TBI within 24 hour of injury over a year period ranging from October 2014-September 2015. total white blood cell count was done with 24 hours of TBI GCS score and PR was assessed within 24 hours of injury. P value < 0.05 was taken as significant. Data collected were collated using statistical package for social science (SPSS) Illinois Chicago version 21.

Results:

In this study the predictive value of total WBCC was weak, evident by area under the curve of 0.633 at statistically significant $p < 0.001$

Conclusion:

It can be concluded that the predictive strength of total white cell count in patients with traumatic brain injury is weaker compared to clinical tool (PR and GCS) used to predict outcome in TBI.



ABSTRACT 33

AUTHORS: MORGAN , E; BANKOLE, F

Author institutions/affiliations: IRRUA SPECIALIST TEACHING HOSPITAL/AMBROSE ALLI UNIVERSITY; Lagos university teaching hospital/university of Lagos

Category: Trauma

Comparison of total white blood cell count within 24 hours of traumatic brain injury with outcome using Glasgow outcome scale –extended in Lagos Nigeria

Submission:

Introduction

Traumatic brain injury (TBI) remains a significant disease burden with great impact on the patient, his family and the community. White blood cell (WBC) count is a laboratory test routinely done in trauma care and has been shown to be predictive of outcome in TBI but the strength of prediction have not been known in comparison with other outcome parameters such as Glasgow coma scale-extended (GOS-E). This research was aimed at comparing the predictive strength of the total white blood cell count within 24 hour of TBI with outcome using GOS-E.

Methods:

This was a one year prospective hospital based study of all patients that presented at the Lagos University Teaching Hospital (LUTH) over a year period with clinical and radiological evidence of TBI within 24 hours of injury and the GOS-E was assessed at six (6) month post injury. One hundred and fifty eight patients with traumatic brain injury who met the inclusion criteria were studied of the 199 patients recruited

Results:

73.4% of these patients were male and 26.6% were female with a male to female ratio of 3.6:1. A negative correlation was shown between GOS-E done at 6 months post-TBI with total WBC count within 24 hours post-TBI at a correlation coefficient of - 0.090

Conclusion:

This study concluded that total white blood cell count done within 24 post-injury is a weak predictor of outcome in patients with TBI compared to GOS-E.



ABSTRACT 34

AUTHORS: MORGAN , E; BANKOLE, F

Author institutions/affiliations: IRRUA SPECIALIST TEACHING HOSPITAL/AMBROSE ALLI UNIVERSITY; Lagos university teaching hospital/university of Lagos

Category: Trauma

Comparison of The Predictive Strength of Total White Blood Cell Count Within 24 Hours on Outcome Of Traumatic Brain Injury With Cranial Computed Tomography Scan

Submission:

Introduction

The enormous disease burden of patients with traumatic brain injury (TBI) remains a huge source of concern to the patient and caregivers. Computed tomography (CCT) scan is a valuable investigative tool in patients with traumatic brain injury which can be used to predict the outcome of TBI. The use of total white blood cell as a predictive parameter in patients with TBI is still at a primordial stage. This study aimed to compare the predictive strength of total WBC count within 24 hours of TBI with cranial computed tomography scan.

Methods:

This was a one-year prospective study done at the Lagos University Teaching Hospital, Lagos. One hundred and fifty-eight patients who presented with isolated TBI and met the inclusion criteria were studied. The total white blood cell count was assayed and the CCT scan was done within 24 hours of TBI. standards statistical tool was used to store and analyse data.

Results:

The mean total WBC count was 14,279.94 and the area under the curve of total WBC count and CCT scan was 0.633 and 0.855 respectively.

Conclusion:

Our conclusion was that despite both parameters been a predictor of the outcome of TBI, the total white blood cell is a weaker predictor of outcome compared to cranial computerize tomography scan.



ABSTRACT 35

AUTHORS: GOROZZO, D

Author institutions/affiliations: Neurospinal Hospital

Category: Trauma

Common Peroneal Nerve Injuries: Indications for Surgery and Repair Strategies

Submission:

Introduction

Common peroneal nerve injuries (CPNI) are the most frequent nerve lesions of the lower limb, due its anatomical peculiarities.

The Author presents her experience in the management and surgical treatment of CPNI

Methods:

A retrospective analysis of the surgical series of the Author is discussed evaluating the causative mechanisms, indication for surgery and the procedures performed. Surgery included 3 possible options according to the referral time to the surgeon after the trauma. Patients referred within one/one and a half year from the traumatic event were submitted to exploration and nerve repair or exploration and nerve repair in association with a tibialis tendon transfer.

When exploration revealed injuries requiring a graft longer than 12 cm, in long dating injuries or CPNI consequent to ankle sprains, tibialis tendon transfer was the procedure of choice.

Results:

Surgical outcome was evaluated after at least a 2 year follow up. In patients that were referred within one year from the traumatic event, nerve repair provided satisfactory surgical outcome when the graft repair was shorter than 6 cm.

In patients submitted to nerve repair in association with the palliative procedure, the causative mechanism clearly affected the outcome: CPNI due to a knee dislocation or stab wounds present excellent recovery but injuries due to fractures, iatrogenic injuries and gunshots had a less favorable outcome.

TA always recovered earlier whereas ECD and EPA recovery appeared later and was less constant.

Conclusion:

In CPNI, indication for surgery and the type of procedure depend on the analysis of multiple factors such as the timing of the surgery, the causative mechanism and the damage sustained by the nerve. Although just a tendon transfer alone is advocated by many surgeons, whenever possible, nerve repair is worthy to be performed as it allows to restore toe function and sensory recovery as well.



ABSTRACT 36

AUTHORS: SOUAFIANE, I

Author institutions/affiliations: Annaba medicine school – Algeria

Category: Socio-economic

Innovation in Neurosurgery in Africa

Submission:

Introduction

African neurosurgeons, like other specialties, face a multitude of problems daily.

The most important is the scarcity of financial resources. Rarity of the availability of materials and consumables in our daily practice.

We are going to present to you the manufacture of mold for the realization of the cranial plastics individualized.

Methods:

Recruitment of patients with a traumatic bone defect of surgical emergencies or patients who underwent cranial surgery where we had to separate from the cranial component (metastasis, bone tumor, infection).

The material used for the making of a mold is a specialized computer application and a 3D printer acquired by the Faculty of Medicine as well as the accessories needed to implement the mold.

Results:

First case: patient of 12 years realization of a mold for a cranioplasty at the level of the vault of the skull (video).

Second case: patient of thirty years, realization of a complex mold including cranial arch orbital arch and roof of the orbit (video).

Conclusion:

Research in our field to improve our services is desirable.

To create networks of research between the different African neurosurgeons in their specializations is an imperative.



ABSTRACT 37

AUTHORS: MUHAMMAD, MI; MAHMUD, MR; YUSUF, AS; OLAOMI, O; UGWUANYI, C; GANA, S; ALFIN, J; TIMOTHY, S; DALHAT, NK; ARUNA, A

Author institutions/affiliations: National Hospital, Abuja; National Hospital Abuja; National Hospital, Abuja; National Hospital, Abuja; National Hospital, Abuja; National Hospital, Abuja; National Hospital; National Hospital, Abuja; National Hospital; National Hospital, Abuja

Category: Trauma

Descriptive Epidemiologic Features of Paediatric Head Injury: Three Years Data from A Trauma Center

Submission:

Introduction

Cases of Paediatric head injuries reported from Nigeria are very few and mostly managed in an accident and emergency setting. The main objective of this study is to highlight the impact of managing head injured patients especially children in a dedicated trauma set up and to obtain population-based data

Methods:

This retrospective study was based on medical records of children with head injury who were hospitalized at a National trauma center between September 2014 to August 2017 (3 years period)

Results:

Demographic Information and clinical records of the study subjects were retrieved from the trauma registry and hospital electronic medical record, using structured database designed in Microsoft Access

Conclusion:

All children, aged 0-14 year whose diagnosis indicated mild, moderate and severe head injuries at the time of admission were included. Also included were cases of skull fractures, Sub-arachnoid, acute subdural and epidural hematoma.

Total of 3100 patients were managed during the study period, out of which 825 (27%) were head injured cases. We managed 126 (15%) cases of paediatric head injuries. 76 boys and 50 girls (M: F=1:1.5). Motor vehicle accidents account for 67.7%, falls 14% and violence 7%. Mild head injury (GCS of 13-15) constituted 85%, moderate 10 % and severe 5%. Only five cases (4%) had neurosurgical intervention on account of acute subdural and epidural hematoma. 80% recovered fully and were discharged home. 6 patients died, mortality correlating well with severity of the head injury with GCS of less than 6.

Priorities for prevention of head injuries in children should include prevention of vehicular pedestrian accidents in developing countries



ABSTRACT 38

AUTHORS: MUHAMMAD, MI; MAHMUD, MR; YUSUF, AS; GANA, S; ALFIN, J; DALHATU, NK; ARUNA, A

Author institutions/affiliations: National Hospital, Abuja; National Hospital, Abuja

Category: Spine

Early Favorable Post-Operative Outcome Following Gross Total Resection of Myxopapillary Ependymoma Of the Cornus Medullaris: A Case Report

Submission:

Introduction

Myxopapillary Ependymoma (MPE) is a rare neuroectodermal tumor commonly affecting the lower segments of the spinal cord and cauda equina. Only one case has been reported in Nigeria. We report a case of myxopapillary Ependymoma (WHO grade 1) of Conus Medullaris

Case:

This is a case report of a 30-year-old woman who presented to our institution with progressively worsening low back pains of three years duration. The pain increased in severity and intensity within three months prior to presentation. Pains radiates to both legs and the feet, with one block claudication distance. There was progressive difficulty in walking and numbness on the dorsum of the feet.

Discussion:

Examination revealed a patchy sensory deficit in L5/S1 dermatome with normal muscle power in all muscle groups.

MRI showed Intradural Extramedullary tumour from T12-L3. She had T11-L4 laminectomy and en-bloc Gross total resection of an intradural extramedullary reddish grey tumour with clear dissectible tumour plane.

Her immediate postop condition was satisfactory; commenced ambulation on the 3rd postop day and was discharged home on the 6th postop day

Histopathology and Immunohistochemistry confirmed Myxopapillary Ependymoma (WHO Grade I) She has remained symptom free for five months postoperatively.

Ependymal tumors are rare, with an incidence of approximately 0.2 per 100,000 person-years with a slight predominance in men and Caucasians. However, there is a slight trend of increasing incidence over the past 35 years. Only 0.5% of all ependymomas are classified as myxopapillary, suggesting an incidence of approximately 0.01 per million person-years. No specific risk factors for the development of ependymoma have been identified, though associations with neurofibromatosis type 2, SV-40 polyomavirus exposure, and lack of maternal consumption of prenatal vitamins have been suggested



ABSTRACT 39

AUTHORS: NDUBUISI, C; EJEMBI, G; NDUKUBA, K; OHAEBULAM, S

Author institutions/affiliations: Memfys Hospital for Neurosurgery, Enugu, Nigeria ; Memfys Hospital for Neurosurgery, Enugu; Memfys Hospital for Neurosurgery, Enugu; Memfys Hospital for Neurosurgery, Enugu

Category: Paediatric Neurosurgery

Paediatric Brain Tumours In Enugu, South-East Nigeria

Submission:

Introduction

Nothing much has been published about pediatric brain tumors in South-East Nigeria. This study analyses the tumour characteristics and management outcome of paediatric brain tumours in Enugu, South-East Nigeria.

Methods:

This retrospective longitudinal study utilized information obtained from medical, radiology and histopathology records of all pediatric tumor cases managed at Memfys Hospital for Neurosurgery Enugu, the major referral centre, from 2006 - 2017.

Results:

Total number of cases was 54; males were 26(48.1%) and females 28(51.9%). Mean age at presentation was nine years. Peak age group at diagnosis were 0-5years (37.0%) and > 10yrs (40.8%). The most frequent presenting symptoms of supratentorial tumors were limb weakness (70%), convulsions (50%) and altered consciousness (48%). Infratentorial tumors presented mostly with gait disturbance (82%), vomiting (72%) and altered consciousness (48%). There were 51(94.4%) primary and three metastatic tumors. Supratentorial tumors were 28(51.9%) and infratentorial tumors were 26(48.1%). Histologic types were: glioma 20(37.0%), medulloblastoma 13(24.1%), craniopharyngioma 11(20.4%), meningioma 2(3.7%). Other tumours including serminoma, pineoblastoma, neuroblastoma, neurofibroma, rhabdomyosarcoma and pituitary adenoma accounted for 8(14.8%). The commonest supratentorial tumors were gliomas 11(39.3%) and craniopharyngioma 11 (39.3%) while the commonest infratentorial tumor was medulloblastoma 13(50.0%). Gross total resection (GTR) was achieved in 28(51.9%), subtotal resection (STR) and biopsy in 26(48.1%). Patients with Karnofsky score $\geq 70\%$ had a greater number of GTR 16(65.2%) while those with scores $\leq 60\%$ had more STR 18(58.1%). At one-year post surgery, 16(64%) of those that had GTR lived normal lives while only 4 (20%) of STR lived normal life. Among the GTR group only 7(28.0%) died compared to the 11(55.0%) deaths recorded following STR. Overall, 55.6% of patients were at least independent at one year.

Conclusion:

Glioma, medulloblastoma and craniopharyngioma are the most common pediatric brain tumors in South-East Nigeria. Management outcome is good and affected by extent of tumor resection.



ABSTRACT 40

AUTHORS: NKWEREM, SP; OHAEBULAM, PS; MEZUE, PW; NDUBUISI, DC

Author institutions/affiliations: Memfys Hospital for Neurosurgery, Enugu, Nigeria; Memfys Hospital for Neurosurgery, Enugu, Nigeria; University of Nigeria Teaching Hospital, Enugu, Nigeria; Memfys Hospital for Neurosurgery, Enugu, Nigeria

Category: Spine

Important Dimensions for Transpedicular Fixation in South-Eastern Nigerians

Submission:

Introduction

Transpedicular fixation is seen as the 'gold standard treatment' of the lumbar spine instability. The dimensions necessary for safe and effective fixation vary with sex and races. Data is rare for the South-Eastern Nigerian population.

Aim: To determine the dimensions that are important in transpedicular fixation for the South-Eastern Nigerians.

Methods:

This is a prospective study, involving patients aged between 20 and 70 years. It was conducted on patients who presented at the radiology unit in Memfys Hospital for Neurosurgery, Enugu for lumbosacral and/or abdominal CT scan. Patients with musculoskeletal anomalies or lumbar spine injuries were excluded. There were 287 participants.

Results:

The mean longitudinal diameter for each level was as follows: L1: 8.22mm, L2: 7.73mm, L3: 7.40mm, L4: 7.16mm, L5: 6.87mm. The mean transverse diameters were as follows: L1: 5.05mm, L2: 5.31mm, L3: 6.72mm, L4: 8.27mm, L5: 11.31mm. The mean maximum length of pedicle: L1: 46.61mm, L2: 47.97mm, L3: 47.14mm, L4: 45.54mm, L5: 43.47mm. The transverse angles were: L1: 17.8°, L2: 19.34°, L3: 20.79°, L4: 22.01°, L5: 25.73°. The longitudinal angles of inclination were: L1: 19.43°, L2: 18.61°, L3: 17.97°, L4: 17.09°, L5: 16.40°. The transverse, longitudinal dimension and maximum length of pedicle were larger in males. The data obtained differ from data for other races.

Conclusion:

Pedicles dimensions necessary for transpedicular fixation in the South-Eastern Nigerians differ from what is published for other populations and this should be considered in implant design and preoperative selection of implants.



ABSTRACT 41

AUTHORS: OGUNLEYE, O; ISMAIL, NJ; LASSEINI, A; SHEHU, BB; OTORKPA, EJ; OPARA, OO; OBANIFE, OH

Author institutions/affiliations: Usmanu Danfodiyo University Teaching Hospital Sokoto. Nigeria; Regional Centre for Neurosurgery (RCN), Usmanu Danfodiyo University Teaching Hospital, Sokoto. Nigeria.; Regional Centre for Neurosurgery (RCN), Usmanu Danfodiyo University Teaching Hospital, Sokoto. Nigeria.; Regional Centre for Neurosurgery (RCN), Usmanu Danfodiyo University Teaching Hospital, Sokoto. Nigeria.; Regional Centre for Neurosurgery (RCN), Usmanu Danfodiyo University Teaching Hospital, Sokoto. Nigeria.; Regional Centre for Neurosurgery (RCN), Usmanu Danfodiyo University Teaching Hospital, Sokoto. Nigeria.; Regional Centre for Neurosurgery (RCN), Usmanu Danfodiyo University Teaching Hospital, Sokoto. Nigeria.; Regional Centre for Neurosurgery (RCN), Usmanu Danfodiyo University Teaching Hospital, Sokoto. Nigeria.

Category: Trauma

Serum Electrolytes Profile of Patients with Traumatic Brain Injury; Prospective Observational Study In Sokoto, Nigeria

Submission:

Introduction

Traumatic brain injury (TBI) constitutes major health problem in both developing and developed nations, with significant morbidity and mortality. Electrolytes derangements are commonly seen and as well may worsen the managements of the patients. The aim of this is to demonstrate the prevalence of electrolytes derangements and the relationship between the electrolytes derangements and severity of traumatic brain injury (TBI) patients.

Methods:

All patients with TBI who merited inclusion criteria were recruitment using systematic sampling technique into three groups based on severity of injury. Serum electrolytes (Sodium, Potassium and Chloride) was measured within 24hrs after resuscitation. Serum electrolytes concentration was correlated with varying degree of severity of brain injuries. All patients had standard treatment according to our institutional protocol for TBI patients.

Results:

Sixty (60) patients (Mean age 35.1 ± 11.4 years; 83.3% male, 16.7% female).

This study showed that 18.3% had hyponatremia, 8.3% hypokalemia and 6.7% hypochloremia. A Tukey Post Hoc Test revealed that the mean sodium concentration in Severe TBI (133.52 ± 7.26) was significantly lower than the mean sodium concentration in Moderate TBI (138.20 ± 4.12) and the mean sodium concentration in Mild TBI (140.76 ± 3.28).

Conclusion:

Thirty-three percent of the patients had electrolytes derangements of which sodium is the most affected electrolytes. Monitoring of serum electrolytes during the management of TBI patients is of utmost important and requires earliest possible correction.



ABSTRACT 42

AUTHORS: OKORIE , E; UCHE, E; ONYIA, E; IBEBUIKE, K; MATHEW, M; UZOANYA, M

Author institutions/affiliations: Federal medical Centre, Umuahia ; university of Nigeria Teaching hospital, Enugu; University of Nigeria Teaching Hospital, Enugu; Imo State university Teaching Hospital, Orlu, Imo State; University of Nigeria Teaching Hospital, Enugu; Federal Medical Centre, Umuahia

Presenter: Mesi Mathew

Presenter Institute : University of Nigeria Teaching Hospital Enugu

Category: General Neurosurgery

Early Years of Neurological Surgery in A Tertiary Hospital From A Developing Sub-Saharan African Country: Salient Perspectives From Audit Of Operative Procedures

Submission:

Introduction

The continued effort to tackle the dearth of neurosurgeons in Nigeria has seen proliferation of new centers offering basic neurosurgical services. In the face of manpower and logistical constraints, an audit of the procedures done is necessary for future planning.

Methods:

An 8-year retrospective review of cases treated surgically in an emerging neurosurgical unit of a tertiary referral center was done. Patients' data from admission and operation registers were analyzed using SPSS for Windows, version 21 (SPSS, Inc., Chicago, Illinois, USA). A p value of < 0.05 was considered significant for associations.

Results:

A total of 200 cases were operated over the study period. 149 (74.5%) were males and 51 (25.5%) were females with a M: F ratio of 2.9:1. Patients' age varied from 14 days to 88 years. Paediatric patients were 55 (27.5%) while adults were 145 (72.5%). Sub-group age analysis showed 5% were of neonatal age group, while 14.5% were aged 65 years and above. Trauma and congenital malformations were the most commonly operated conditions accounting for 48.0% and 24.0% respectively. Other conditions include degenerative spinal lesions (7.5%), tumours (7.5%) and infectious lesions (5.5%). Among adults treated, 118 (59.0%) had cranial, while 21 (10.5%) had spinal procedures. Other procedures accounted for 6 (3.0%) cases. There were 10 (5%) post-operative deaths. Tumour surgery (p= 0.0006), female sex (p= 0.01), and cranial procedures (p, 0.04) were associated with higher risk of mortality.

Conclusion:

Trauma is the most common indication for neurosurgical intervention. Based on our study, we recommend the establishment of a regional neurotrauma center to cater for the high trauma case load.



ABSTRACT 43

AUTHORS: OWAGBEMI, OF; YUSUF, AS; MAHMUD, MR; ARUNA, AA; ALFIN, JD; GANA, SI; TIMOTHY, S; DALHAT, NK; IDRIS, MM

Author institutions/affiliations: Neurosurgery Unit, Department of Surgery, Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun state; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria; Neurosurgery Unit, Department of Surgery, National Hospital Abuja, Nigeria

Category: Trauma

Spectrum of Neurosurgical Trauma at National Hospital Abuja, Nigeria

Submission:

Introduction

Neurosurgical trauma, especially to the head and spine, are major causes of death and disability worldwide. The involvement of young people, who tend to be the most productive in society, makes the problem more worrisome. A knowledge of the etiology and pattern of neurosurgical trauma may help drive efforts towards its prevention. The aim of this study is to review the pattern of non-pediatric neurosurgical trauma in our hospital.

This is a retrospective study of neurosurgical trauma in patients above 15 years managed at the National Trauma Center of National Hospital Abuja from September 2014 to August 2017. The trauma register was reviewed, and the patients with neurotrauma were selected. The details regarding biodata, mechanism of injury, presentation, and pattern of neurosurgical injury were retrieved and analyzed.

Within the study period, a total of 3,060 patients aged 16 years and above were managed at the trauma center. Of these, 1,078 (35%) had neurosurgical trauma. Seventy-five percent of the patients were aged 40 years and below. There were more males (86%) than females. Seventy-six percent of the neurosurgical trauma was due to motor vehicle crashes while 14% was due to assault. Most (95%) of the patients had trauma to the head. Of the head-injured patients, 55% had traumatic brain injury, 35% of which were moderate, and 40% severe. Other effects of head trauma in the patients include skull fractures, scalp injuries and post-traumatic seizures. Spinal injury occurred in 6% of the patients, and peripheral nerve injury in one patient.

Neurosurgical trauma, especially involving the head, was responsible for a significant proportion of non-pediatric injuries managed at our trauma center. Efforts to prevent motor vehicle crashes and assault should reduce the occurrence of this type of trauma. This is particularly important in a setting where trauma care is restricted by limited resources.



ABSTRACT 44

AUTHORS: OWOLABI, B; OJO, O; BANKOLE, O

Author institutions/affiliations: Lagos University Teaching Hospital; Lagos University Teaching Hospital.; Lagos University Teaching Hospital.

Category: Socio-economic

Evolution in Practice: How Has Lagos Neurosurgery Changed In The Last 10 Years?

Submission:

Introduction

Neurosurgery is a rapidly evolving surgical specialty driven by technological advances, socio-economic factors and patient expectations. The practice of Neurosurgery in Nigeria is rapidly expanding both in the scope of surgical options available to patients as well as skills of the surgeons. The number of neurosurgeons is also on the increase. This study compares the workload volume in the neurosurgical unit of the Lagos University Teaching Hospital, a tertiary, neurosurgical center from the years 2008 to 2017 and commented on the possible reasons for the changes and the impacts they may have for the future.

Methods:

A retrospective, logbook review of all neurosurgical operations performed by the Neurosurgical team at Lagos University Teaching Hospital, a tertiary, neurosurgical center from January 2008 to December 2017.

Results:

More procedures have been done in all aspects of neurosurgery. Cases like spine and pituitary surgeries are done more frequently now. Current practice has moved from open craniotomy approach for pituitary adenomas to the transsphenoidal approach. Modern neurosurgery practice with the use of endoscope and operating microscopes has helped in surgeries like ETV for hydrocephalus, brain tumors, aneurysm and spine instrumentation. A few vascular and functional surgeries for epilepsy and ruptured aneurysms were done within the period of study. In spinal neurosurgery, instrumentation is increasingly being done. There is a significant increase in annual caseload despite the problem of perennial industrial actions disrupting the provision of healthcare services.

Conclusion:

The scope of services now available can conveniently take care of most of the neurosurgical problems. Public awareness of such services could help in reducing medical tourism and reduce the economic drain on the limited resources of the nation and its people. It will also further help to improve the available care in the country. Systemic reengineering will further drive this quest for excellence.



ABSTRACT 45

AUTHORS: OYELEYE, O; IDOWU, O; AYODELE, O; AKINOLA, A

Author institutions/affiliations: Lagos State University Teaching Hospital, Ikeja, Lagos State; Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria; Lagos State University Teaching Hospital (LASUTH), Ikeja, Lagos, Nigeria.; Lagos State University Teaching Hospital (LASUTH), Ikeja, Lagos, Nigeria.

Category: Paediatric Neurosurgery

Basilar Impression, Invagination and the risk of Syringomyelia in patients with Myelomeningocele using Craniometric Parameters

Submission:

Introduction

Basilar impression and invagination increases risk of syringomyelia. Syringomyelia, although often asymptomatic, can cause significant morbidity. Though it arises from several causes, Chiari malformation is a leading cause of syringomyelia. Patients with idiopathic and Chiari type 1 syringomyelia have significantly reduced height of the posterior fossa which is sometimes linked with syringomyelia. This study aims to examine the height of the posterior fossa, frequency of basilar impression and invagination using craniometric parameters in patients with Myelomeningocele (MM).

Methods:

This is a prospective consecutive study of patients with MM which was carried out at the Division of Neurological Surgery in LASUTH, Ikeja, Lagos, Nigeria. The demographic information, occipitofrontal circumference and craniometric computerized tomographic measurements (chamberlain line, Mcgregor line, McRae line and Wackenheim clivus lines, and Klaus height index) were measured and entered into a procedural form. The measurement was undertaken using Radiant Dicom viewer 64-bit software. Statistical analysis was performed by IBM SPSS statistics version 22. P-value < 0.05 was considered significant.

Results:

Twenty patients were studied. The male/female was 3:2. Seventy percent of the subjects were neonates with a median age of 26 days. The mean Klaus height index was 30.56 +/- 8.9mm while 65% of subjects had Klaus height index < 30mm. None of the patient had basilar invagination.

Conclusion:

Basilar invagination is not common in MM patients. This study shows that low Klaus index is predominant in MM.



ABSTRACT 46

AUTHORS: OZOR, I; OKORO, PE; BASIL-NWACHUKWU, C

Author institutions/affiliations: ESUTH; ENUGU STATE UNIVERSITY TEACHING HOSPITAL; ENUGU STATE UNIVERSITY TEACHING HOSPITAL

Category: Trauma

Management of Traumatic CSF Fistula: Our Experience in a newly established Neurosurgical Unit of a state-owned hospital, South East Nigeria

Submission:

Introduction

Traumatic CSF fistula occurs when there is fracture of the base of the skull with dural tear. It can follow surgical or non-surgical trauma with over 80% of the cases of traumatic CSF fistula occurring because of non-surgical trauma. Road traffic accident is the leading cause of traumatic CSF fistula via the nostrils or the ears. The leak may occasionally not occur on the side of the dura tear. Majority will manifest within 48 hours and will stop spontaneously within 7 days. Few may require surgical intervention. Our aim is to showcase our experience in the management of patients with traumatic CSF fistula.

Methods:

A retrospective study on 30 patients with traumatic CSF fistula over a two-year period. Information were retrieved and analysed using simple statistics and SPSS version 16.

Results:

24(80%) were males and 6(20%) females (M: F = 4:1). Their ages range from 3 to 70 years, the peak age group was 18-35 years with the mean age 27. The aetiologies varied with 60% following RTA, 20% fall from height and 20% from assault. 18 patients presented with CSF otorrhea, 10 CSF rhinorrhea and 2 with both otorrhoea and rhinorrhoea. Conservative treatment with empirical antibiotics was adopted in all and the fistulae closed within 5 to 10 days. There was no complication of meningitis in any of the patients.

Conclusion:

Traumatic CSF fistula is relatively common. A number of them present within few days of injury. Conservative treatment still remains the first line of action.

(Keywords: Fistula, Otorrhea, Rhinorrhea, Assault, Cerebrospinal Fluid).



ABSTRACT 47

AUTHORS: HERMANN, N; LANDRY, D; AKA GUY, V; OKA DOMINIQUE, N

Author institutions/affiliations: CHU YOPOUGON; CHU YOPOUGON; Chu Yopougon; CHU YOPOUGON

Category: Cerebrovascular

Microsurgical Anatomy of The Adamkiewicz Artery–anterior Spinal Artery Junction

Submission:

Introduction

The aim of this study is to describe the anterior spinal artery-Adamkiewicz artery (ASA–AKA) junction and establish a classification allowing defining the neurological risk in either thoraco-abdominal aorta aneurysm treatment and in anterior or transforaminal thoracolumbar spine surgery.

Methods:

Fifteen spinal cords of fresh cadavers were dissected. Both lumbar arteries and ASA were injected with strongly diluted red-colored silicon.

Results:

The dural crossing of AKA was located on the left side in 86 % of cases, between T8 and T10 in 73.33 % of cases and L1–L2 in 26.67 % of cases. The average diameter of the ascending branch of AKA was 1.10 mm (range 0.8–1.9 mm), and its average length was 30.27 mm (range 12.3–60 mm). The AKA's arch average diameter was 11.3 mm (range 9–20 mm) with an open downward angle average of 20.1°(range 11°–30°). The descending branch of AKA which was a continuation of ASA had an average diameter of 1.33 mm (range 0.8–1.86 mm). The ASA at the top of the arch had an average diameter of 0.74 mm (range 0.2–1.77 mm). According to these findings, we have proposed a new classification with two types of junctions.

The type I and its variant correlated to high neurological risk were present in 93.33 % of cases. The type II, correlated to medium or low neurological risk, was present in 6.67 % of cases.

Conclusion:

These anatomical findings allow a planning of the neurological risk before thoracoabdominal aorta aneurysm or thoracolumbar anterior or transforaminal spine surgery.



ABSTRACT 48

AUTHORS: SAYORE, CM

Author institutions/affiliations: MOROCCO

Category: Trauma

Upper Cervical Spine Injuries: Therapeutic Management, Our Experiences About 93 Cases

Submission:

Introduction

Upper cervical spine injuries are often encountered in neurosurgical trauma practice. They may cause injury to the brain stem or high cervical cord resulting in complete or incomplete dysfunction.

Methods:

This retrospective study was done in the neurosurgery department of Ibn Sina Hospital, in Rabat. It was carried out from 1996 to 2017 and included 93 patients admitted for management of upper cervical spine injuries

Results:

80% of patients were male, ages ranged from 16 to 75 years. Most were young adults. Traffic accidents were the major traumatic cause. A cervical spine syndrome was present in about all patients (90%), and neurological deficit was noted in 17 cases. All patients were explored with X-ray radiographs and scanography. 15 patients presented with both upper and lower cervical spine injuries. 22 were admitted for management of a polytrauma. All the patients were treated by medical therapeutics. Orthopedic treatment was carried out exclusively for 45 patients; these cases included stable spinal injuries. It consisted either on a Philadelphia collar or plaster or plexiglass casts. Surgical management was performed for 48 patients, posterior approach in 33 cases and anterior approach in 15 cases. Neurological improvement in 12 patients (out of 17). The five others suffered from medullary contusions, delaying neurological recovery.

Conclusion:

Early management of upper cervical spine injuries bring better outcome. The radiological analysis must be meticulous to decide for the therapeutic procedure either conservative management or surgical fusion. Early presentation and diagnosis is the key to the successful outcome of treatment and is vital in preventing secondary complications especially with neural deficit.



ABSTRACT 49

AUTHORS: SHAIKH, Y

Author institutions/affiliations: Liaquat National Hospital

Category: General Neurosurgery

Factors predicting poor outcome after gunshot injuries to brain in Afghanistan civilian population

Submission:

Introduction

The Purpose of this study is to identify the prognostic factors that lead to poor outcome or mortality following gunshot injuries to Brain in War torn Afghanistan civilian population - A review of 45 cases

Methods:

All the patients who presented with Gunshot injuries to Head in Emergency and OPD from July 2012 to July 2017 were recruited in the study. For statistical analysis, patients were categorized in to 2 groups. Poor outcome (GOS 1-2) and satisfactory outcome (GOS 3-5). Similarly, based on admitting GCS, patients were classified in to 4 groups; minimal or no neurological deficits (GCS 14-15), significant deficits without coma (GCS 9-13), comatose but not moribund (GCS 5-8) and moribund (GCS 3-4). Inclusion criteria were all patients who sustained gunshot injury to head in past 3 months. Exclusion criteria were patients who were brought dead or expired within 2 hours of injury.

Results:

A total of 45 patients were included in the study. Overall mortality was 3 (6%) while all the remaining 42(94%) patients survived. Of the 42 survivors at discharge, 59% had good recovery, 14% had moderate disability and 21% had severe disability. 4% patients were in persistent vegetative state. CT scan demonstrated 15% patients with bullet tract involving the scalp and soft tissue with no penetration of bone or Dura. 55% patients had involvement of one lobe while the remaining 29% patients had multilobar injuries. Among patients with one lobe injury 93% had satisfactory outcomes while 6% had poor outcome. Among the 13 patients with extensive brain injury, 77% patients had satisfactory outcome while 2 (15%) had poor outcome and one patient (7%) expired.

Conclusion:

Statistical analysis reveal that low admitting GCS and multilobar injuries predict poor outcome.



ABSTRACT 50

AUTHORS: SINHA, SS

Author institutions/affiliations: Sheffield Teaching Hospital

Category: Paediatric Neurosurgery

Shunt Valve Use in Neonatal Hydrocephalus: A Single Centre Experience

Submission:

Introduction

The management of hydrocephalus in neonates presents a unique set of challenges compared to older children. Shunt survival is the desired goal of treatment. Complications such as infection and over drainage add a significant burden to this patient population. We sought to determine whether there is any difference in the use of a flow-controlled valve over a differential pressure valve with an anti-siphon device in this patient population.

Methods:

A retrospective case series of primary shunt procedures during or immediately following the neonatal period, from August 2011 to February 2018 at Sheffield Children's Hospital. Fifty seven patients were included in this study, thirty three were born prematurely and twenty-five at full term. Thirty-five patients had an adjustable valve (Miethke ProGav) and twenty-two had a flow regulated valve (Orbis-Sigma) inserted.

Results:

Of the fifty-three patients with adequate follow up, the one-year shunt survival was 25% (8/32) for the adjustable valve group and 38% (8/21) for the flow regulated valve group ($p = 0.37$ [Odds ratio: 1.8, 95% confidence interval 0.6-5.8]). The most common causes of shunt failure were proximal blockage (12), infection (9), and distal blockage (8). Clinical signs of over drainage were seen in 57% (20/35) in the adjustable valve group and 32% (6/22) in the flow regulated group ($p = 0.03$ [Odds ratio: 0.3, 95% confidence interval 0.1-0.9]). Increasing the valve setting was an effective treatment for over drainage. Two patients with adjustable valves developed secondary sagittal craniosynostosis.

Conclusion:

One-year shunt survival rates are poor in neonates regardless of shunt valve selection. Our case series demonstrates that flow regulated valves may potentially be associated with a lower incidence of over drainage in neonates. Symptomatic over drainage can be managed by increasing shunt settings in patients with adjustable valves.



ABSTRACT 51

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Category: Paediatric Neurosurgery

Neonatal Operative Neurosurgery in Southeast Nigeria: A 2 Centre Experience

Submission:

Introduction

Operative neurosurgical treatment of neonates is extraordinarily complex when compared to treatment of older children. The neonate's pulmonary, cardiac, nutritional, renal and thermoregulatory reserves are limited. They are more susceptible to infection and have an altered metabolic response to operative stress. The outcome of neonatal surgeries has improved in high income countries.

This study evaluates the aetiology of diseases and pattern of neonatal neurosurgical operations undertaken at 2 tertiary centres in southeast Nigeria.

Methods:

We retrospectively analyzed neonatal operative neurosurgical procedures undertaken in 2 referral hospitals in southeast Nigeria, from January 2010 to January 2017.

Results:

Of the 522 paediatric patients who received operative neurosurgical care within the study period, 37 (7.1%) patients were neonates. There were 21 males and 16 females with a male-female ratio of 1.3:1. The ages of presentation of the neonates ranged from 3days to 28 days with a mean age at surgery of 16.2 days. The common neurosurgical neonatal conditions were myelomeningocele (72.97%), hydrocephalus (24.3%), and encephaloceles (10.8%). Forty operative procedures were done in 37 patients including myelomeningocele repair, ventriculoperitoneal shunt insertion and encephalocele repair. All procedures were done under general anaesthesia. The procedures were done as elective in 89.2% (33/37) of the cases and as emergency in 10.8% (4/37) -all ruptured myelomeningoceles. Simultaneous myelomeningocele repair and ventriculoperitoneal shunt was done in 3(8.1%) cases. In the post-operative period 10 (27%) patients were nursed in the new born special care units but none was nursed in the neonatal intensive care unit which was nonexistent. Post-operative complications occurred in 8 (21.6%) cases and overall 30-day mortality was 13.5% (5/37). Causes of mortality were anaesthesia complications, sepsis and respiratory complications.

Conclusion:

Congenital CNS malformations are the commonest conditions requiring operative neurosurgical care in southeast Nigeria. There is need to provide neonatal intensive care facilities to improve surgical outcome.

