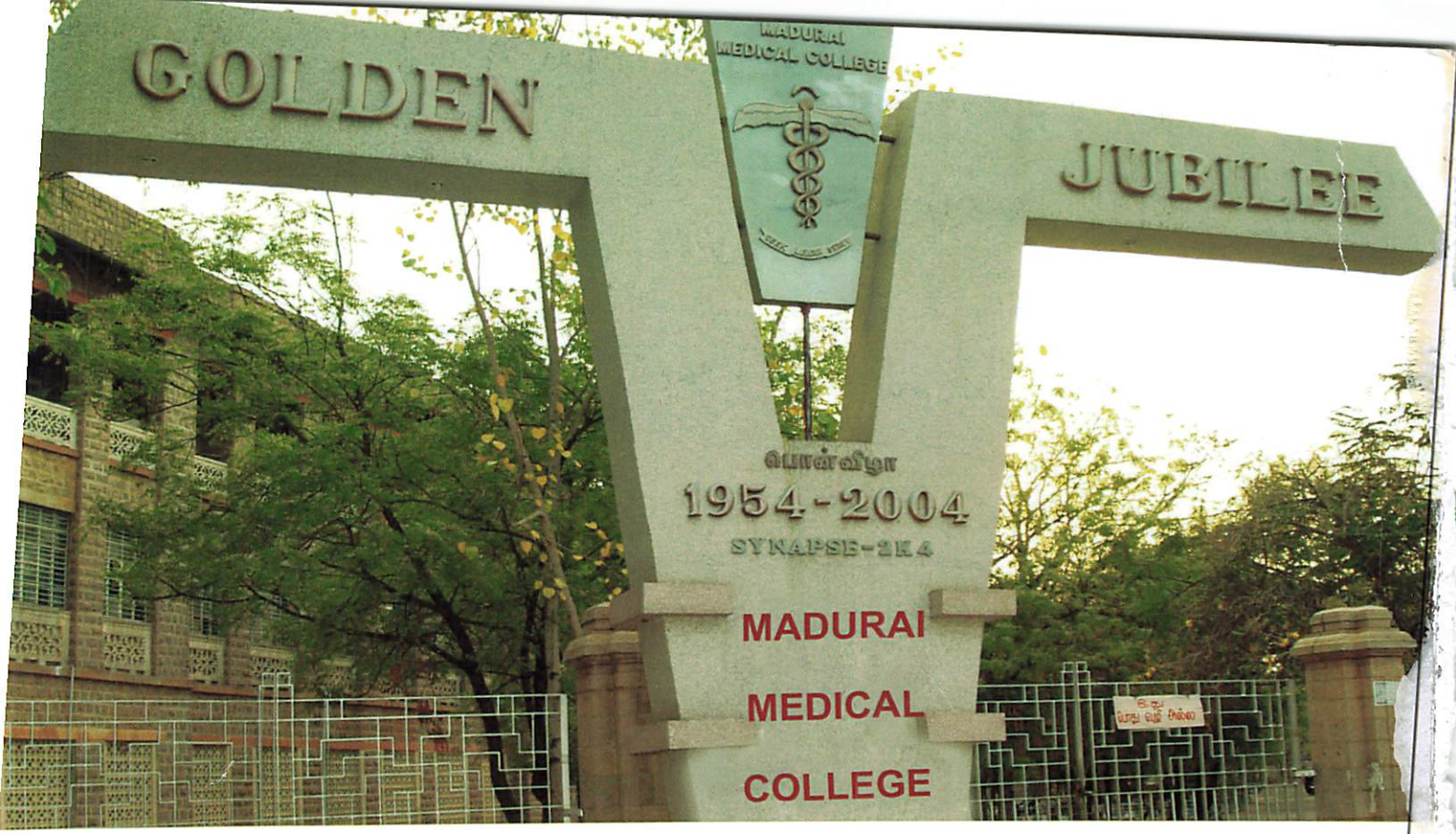
TANS 2018

MADURAI NEUROSURGICAL SOCIETY

April
6th to 8th
2018

The Carlton
Kodaikanal

ABSTRACT BOOK



With Best Compliments from

Dept. of Neuro Surgery,
Madurai Medical College &
Govt. Rajaji Hospital, Madurai

Dr. J.K.B.C. PARTHIBAN
Founder President
TANS

MESSAGE FROM THE FOUNDER PRESIDENT, TANS

Dear Friends,

TANS

It is a pleasure to be the Founder President of Tamilnadu and I thank for the responsibility bestowed on me on the evening of NSICON 2016. Neurosurgery was born in this part of our vast country and has grown in status and maturity and is now in par with any society in the world. Though we are late to start our regional association nothing has gone waste since many of our seniors were dedicating their life to the development of Indian Neurosurgery as a whole. It is time to look in to ourself at regional level and work for further development in our field.

I take this opportunity to put forward three essential points in front of all neurosurgeons of Tamilnadu and Pondicherry :

1. Training and Education
2. Guiding and Guidelines
3. Progression

TANS should have these three goals in mind. Regional training and education in Neurosurgery and Spinal surgery should be promoted for the benefit of developing young neurosurgeons and postgraduates. The association should guide non-government and government organisations in maintaining road safety measures and also formate guidelines that can be suggested to these organisations in the management brain and spine disorders including neurotrauma. Finally there should be progression of surgical care provided all over Tamilnadu and Pondicherry as a whole, maintaining equal standards in the region. This can be achieved only by strong collaboration among neurosurgical centers in these two states. TANS is an ideal forum where we can achieve all these. A strong forum is the need of the hour and hence I welcome every one to TANS 2018.

I wish the Organising Committee a grand success at this beautiful venue - Kodaikanal .

Dr. J.K.B.C. PARTHIBAN
Founder President,
TANS.

Dr. J. SRISARAVANAN
Secretary TANS,
Organizing Secretary,
TANS 2018.

MESSAGE FROM THE SECRETARY TANS AND ORGANIZING SECRETARY TANS 2018

Dear friends,

It is with an immense sense of happiness and pleasure that I welcome you all to this historic annual state level conference of the Tamilnadu Association of Neurological Surgeons TANS 2018.

Having realized the dream of having a state level association of neurosurgeons the next logical step was to provide a solid platform for the dissemination and sharing of the nuances of neurosurgical practice and to establish a repository of experience sharing and haven of knowledge to serve as a guiding beacon for younger generations to follow.

TANS 2018, I sincerely hope would be a pioneering and enduring step in that direction At this juncture I would like to express my whole hearted thanks and deep gratitude to our senior colleagues and teachers for their steadfast support and encouragement and their valuable inputs and to all other colleagues and friends who were instrumental in the overwhelming success of this program with their contributions both in their personal capacity and also encouraging their junior colleagues and residents to utilize TANS as a platform for presentations.

It is also a matter of great pride that our efforts at getting accreditation status for the program were successful and I hope this meeting will be a harbinger of greater things to be achieved in the not too distant future.

This meet has been structured in a way so as to encompass in a nutshell the whole spectrum of neurosurgery and as a snapshot of the stupendous and varied nature of work that is being done by our fraternity. The meet I hope will also serve as a bridge for the meeting of the minds of experience and enthusiasm for mutual professional development.At this juncture I would also like to place on record my sincere thanks to Prof Juha Hernesneimi and Prof. Iype Cheran for gracing this momentous occasion and participating in it with unbridled enthusiasm.

I once again welcome you all to Kodaikanal for the conference and sincerely hope that this would be an unforgettable and cherished experience and that TANS annual meet would grow to become an indispensable and essential fixture in the annual academic calendar of neurosurgical meets for eons to come.

Thank you and hope you enjoy the experience.

Dr. J. SRISARAVANAN
Secretary TANS,
Organizing Secretary,
TANS 2018.

DR. K. SELVAMUTHUKUMARAN
Organising Chairman,
TANS 2018.

MESSAGE FROM ORGANISING CHAIRMAN

Dear Friends,

It gives me immense pleasure to welcome you all to the Second Annual Conference of Tamilnadu Association of Neurological Surgeon to be held at Kodaikanal from April 6 - April 8th 2018.

I am very happy to see so much quality papers from virtually every centre in Tamilnadu. I feel that our association in heading in the right direction.

I wish that our members earn more laurels at National and International level in the years to come.

Thanking you and wish you a wonderful time at the Conference.

DR. K. SELVAMUTHUKUMARAN
Organising Chairman,
TANS 2018.

1

OBSERVATIONAL STUDY OF "UNKNOWN" HEAD INJURY PATIENTS IN A TERTIARY CARE NEUROSURGICAL CENTRE

Manikandan P, Raghavendran R, Institute of Neurosurgery , Madras Medical College and RGGGH,Chennai

This was a retrospective study, carried out at the Institute of Neurosurgery, Madras Medical College and Rajiv Gandhi Government General Hospital, Chennai. Many patients with head injury whose identity cannot be ascertained, are admitted in our hospital. Care and management of these neglected patients from prehospital till discharge, rehabilitation or death is fraught with many challenges. Very few studies in world literature are available on this subgroup of patients. We analysed data pertaining to 90 consectuive patients at our hospital.

Out of 90 patients, 81 were male (90%), most were in the age group of 60 years and above. Principal cause of head injury was Road traffic accident seen in 78 patients (86.67%). Majority of patients had Glasgow coma scale less than 8 on admission. Seventy three patients (81.11%) were treated conservatively and 17 patients needed surgery.

Eight patients had good recovery. During the course of treatment, identity of 33 patients (33.67%) could be established. Thirteen patients were discharged to home and one patient referred to destitute home.

2

DECOMPRESSIVE CRANIECTOMY IN MCA INFARCT : AN INSTITUTIONAL EXPERIENCE OF ONE YEAR

Dibyajyothi Bora, Institute of Neurosurgery, Madras Medical College and RGGH, Chennai

Introduction

Malignant middle cerebral artery (MCA) infarction occurs in 10% of all ischemic strokes and these severe strokes are associated with high mortality rates. Decompressive hemicraniectomy (DHC) is frequently a life-saving procedure that has shown the highest grade of evidence in reducing mortality and improving functional outcomes in healthy young patients. The purpose of this study is to share our experience with decompressive craniectomy in malignant MCA infarct over a period of one year with special emphasis on management and outcome.

Materials and Methods

Totally, 28 patients who underwent decompressive craniectomy after malignant MCA infarction between January 2017 and January 2018 at our institute were analyzed for preoperative clinical condition, timing of surgery and location and extension of infarction. The outcome was assessed in terms of mortality and scores like modified Rankin scale (mRS).

Results

Totally, 28 patients aged between 15 and 70 years (mean age was 47.1 years) were analyzed in this study. Majority 35.7% patients were in the age group of 30-40 years. Most of the patients were operated within the first 48hours of admission. Approximately 85% patients who survived had mRS 0–3 at discharge.

Conclusion

Decompressive craniectomy has reduced morbidity and mortality especially in people aged below 60 years and those operated within 48 h of malignant MCA stroke though those operated outside 48 h of stroke also fare well neurologically, there is no reason these patients should be denied surgery.

3

SUB GALEAL PRESERVATION OF CALVARIAL FLAPS AFTER CRANIECTOMY

Sheik Mohammed Sameer Khan M, Srisaravanan J Department of Neurosurgery, Madurai Medical College

An alternative method for preserving skull bone flap after decompressive craniectomy under a tissue pocket of adjoining galea aponeuritica in the vicinity of the operative site is described. This method was used in 6 patients and the flap was successfully replaced in five of these cases.The procedure has the ease of placement with excellent cosmesis and prolonged survival of bone flap.

Materials and Methods

A prospective study and analysis of six cases who underwent decompressive craniectomies at Government Rajaji Medical college hospitals was done over a period of 18 months. Skull bone flap was preserved in the subgaleal pocket in cases of decompressive craniectomies following traumatic brain injury in all the six patients.

Results

Average extra time required for subgaleal dissection was 15 minutes (range: 11-19 minutes) and average size of bone flap was 10 x 9 cms (range: 8-13 x 7-12 cms). The average duration of preservation before interval cranioplasty was 3 months (range: 6 weeks to 8 months).

Conclusion

Subgaleal preservation of calvarial flaps following decompressive craniotomy is an accepted, safe, efficient, alternate technique with low morbidity rate and good cosmetic results.

4

SITTING POSITION IN PAEDIATRIC NEUROSURGERY

Babu R, Saranyan R, Raghavendran, Institute of Neurosurgery, Madras Medical College and RGGH, Chennai

Purpose

To discuss about Sitting Position in Pediatric Neurosurgery. In this paper, precautions, merits and disadvantages of Sitting Position in Pediatric Neurosurgery is discussed.

Conclusion

With Advancements in Anesthetic and Neurosurgical Techniques, Sitting Position can safely be practiced in Children whenever surgical indication warrants.

5

HISTOPATHOLOGICAL STUDY OF THE OUTER MEMBRANE OF THE DURA MATER IN CHRONIC SDH

Rajarajan J,Venkatesh R,Department of Neurosurgery,Coimbatore Medical College,Kovai

BACKGROUND

A chronic subdural hematoma is frequently encountered in neurosurgical practice and occurs at a rate of 1-2/1,00,000 per yr.Various theories are proposed explaining the underlying pathophysiology. Recent focus of investigation is on the mechanism by which CSDH develops and expands by evaluating the contents of hematoma and histopathology of Outer membrane of chronic SDH cavity.

AIM

To evaluate the role of outer membrane in chronic subdural hematoma evaluation and to correlate its histopathology with clinic-radiological aspects of the condition and overall prognosis of patients

MATERIALS & METHODS

This study in our department of neurosurgery incorporates 60 cases of chronic SDH who underwent surgery in the department from April 2017 to Mar 2018 and such cases were analyzed clinically, radiologically and by recording histopathological features of the CSDH membrane. Histological features were classified into four types according to maturity and intensity of the inflammatory reaction and hemorrhage- Type I (noninflammatory membrane) Type II (inflammatory membrane) Type III (hemorrhagic inflammatory) Type IV (scar inflammatory membrane)

CRITERIA FOR INCLUSION

All cases of chronic subdural haematoma irrespective of age and sex were incorporated into the study

CRITERIA FOR EXCLUSION

All cases of acute subdural haematoma and cases of chronic sub dural hematoma which were managed conservatively irrespective of age and sex were excluded from the study.

RESULTS

In our series of cases, the most common histopathological type of membrane is the type I seen in 40% of cases followed by Type IV seen in 36% of cases while Type II and type III were seen in 20 % cases each. 66% of Patients with inflammatory type of membrane (Type II) had GCS <8 and had layering type of CSDH and required craniotomy. HPE of the CSDH membrane widens/completes the spectrum of CSDH in terms of severity of disease and overall prognosis of patient.

6

PROSPECTIVE OBSERVATIONAL STUDY IDENTIFYING THE RISK FACTORS AND FINDINGS IN INITIAL CT SCAN WHICH PREDISPOSES FOR THE DEVELOPMENT OF HYDROCEPHALUS IN PATIENTS WITH SEVERE HEAD INJURY

Ravi kiran Gorijala, Gowtham Kuncha, Sai Kiran Pattupogula, Bagath Singh K, Selvamuthukumaran K
Meenakshi Mission Hospital and Research Center, Madurai, Tamil Nadu, India

Introduction

To identify the risk factors like age, admission Glasgow Coma Scale (GCS), decompressive craniectomy (DC) and findings in initial Computed tomography (CT) scan like Subarachnoid hemorrhage (SAH),

Intraventricular hemorrhage (IVH) and skull base fracture which may predispose for the development of hydrocephalus in traumatic severe head injury patients

Materials and methods

Single center prospective observational study in which patients with age >=14 and GCS <=8 are followed with regular CT scan for a period of 4 months during January 2013 to January 2016 admitted in our hospital

Results

A total of 32 post traumatic hydrocephalus cases have been identified among 489 cases included in the study resulting in the incidence of 6.54 %. Mean duration of presentation was 48.76 +/-33.26 days. 82% of patients in hydrocephalus group had SAH while 52% in non hydrocephalus group had SAH in initial scan (P=0.001). Decompressive craniectomy was done in 69% patients with hydrocephalus while only 32% of non hydrocephalus group underwent DC (P=0.00001). Other parameters namely age, sex, GCS, IVH and skull base fractures were not significantly associated with development of hydrocephalus.

Conclusion

Decompressive craniectomy and SAH significantly increases the probability of development of post traumatic hydrocephalus while other factors like IVH, base of skull fracture, age and admission GCS do not increase the development of hydrocephalus. Early cranioplasty may prevent the development of hydrocephalus is to be studied.

7

PROFILE OF CRANIOPLASTY IN TERTIARY CARE CENTRE

Rajarajan P, Raghavendran R, Institute of Neurosurgery, Madras Medical College and RGGGH, Chennai

BACKGROUND

Cranioplasty for reconstruction of skull defects is a common neurosurgical practice. An understanding of clinical indications, timing, appropriate surgical technique, potential complications are critical for successful outcome. Here is a study analyzing a series of cranioplasty in tertiary care centre.

METHODS

In this study ,27 patients with age group from 6 months to 60 years (median=29),male(88%,n=27) and female (12%,n=27),admitted in single neurosurgical unit during 2016 to 2018 for whom cranioplasty performed are studied for their indications,pre operative complications, timing of cranioplasty taken as early (<3months) or delayed (>3months), post op complications.

RESULTS

Of the 27 patients ,22cases were post traumatic(81.5%, n=27),15 cases following decompressive hemicraniectomy(55.5%,n=27),7 cases following wound debridement with excision of depressed fracture (26%,n=27),5 cases were nontraumatic (18.5%,n=27). Of the pre cranioplasty complications, 5 cases had hydrocephalus requiring VP Shunt(18.5%,n=27),1 case had pneumonia (3%,n=27), 1 case had left temporal cystic collection following intraventricular SOL excision(3%,n=27). Early cranioplasty done for 18 cases (66%,n=27), delayed cranioplasty done for 9 cases(34%,n=27). materials used were Titanium mesh for 24 cases(89%,n=27),Bone cement for 2 cases(7%,n=27), autologous bone graft for 1 case(3%,n=27). Post op complications encountered were wound infection for 2 cases(7%,n=27),CSF

rhiorrhoea in 1 case(3%,n=27),CSF collection over flap in 1case(3%,n=27).1 pt. expired during post op period due to persistent hypotension. Early and delayed cranioplasty are compared for post op complications found to have 22%,n=18 and 11%,n=9 respectively with p value 0.4926(>0.05) showing no statistically significant difference. Also cranioplasty following decompressive hemicraniectomy and following depressed fractures excision are compared found to be 22%,n=18 and 14%,n=7 respectively with pvalue 0.6562(>0.05) showing no statistically significant difference.

CONCLUSION

In this study with regards to post op complications, early and delayed cranioplasty has no statistically significant difference.Also cranioplasty following large decompressive craniectomy and depressed fracture excision has no statistically significant difference regarding post cranioplasty complications.

8

FOUR QUADRANT DECOMPRESSIVE CRANIOTOMY - A NOVEL TECHNIQUE

Sheik Mohammed Sameer Khan M Praghadhees R, Rajasekharan G, Department of Neurosurgery, Madurai Medical College

Decompressive craniectomy (DC) with duroplasty is the gold standard for treating traumatic brain injury despite paucity of randomized controlled trials. There are several morbidities associated with DC of which the persistence of bony defect is of paramount importance. Studies have shown that many of the morbidities associated with DC get reversed following replacement of the bone flap.

Four quadrant decompressive craniotomy is a novel technique that avoids a second surgery of revision cranioplasty, and help in reducing the economic burden, as well as in preventing the morbidity of the bone defect.

Surgical technique

Similar to the conventional decompressive bone flap with an additional burr hole at the center, bone flap was divided into four-quadrants beginning from the central burr hole after cutting the periosteum with either a drill with craniotome attachment or Gigli wire. Then, the periosteum on each bone piece was sutured loosely to other pieces, as well as to the periosteum on one side of the calvarium with prolene.

Conclusion

This novel technique combines the effect of adequate cranial decompression and avoids a second surgery to replace the bone flap later on. This procedure is cost effective and also prevented the physical and psychological morbidity of a bone defect. With regression of brain swelling, the bone flaps gradually return to their normal anatomical position. The procedure, therefore, provided a reasonable cosmesis, and also reduced the vulnerability of the underlying brain to external injuries.

9

TRAPPED FOURTH VENTRICLE

Pradeep S, Manimaran R, Jeyakumar R, Veerapandian R, Department of Neurosurgery, Madurai Medical College

Trapped fourth ventricle is a rare entity that has been reported in patients as a late complication of ateral ventricle shunting. The dilated fourth ventricle presents with symptoms similar to posterior

fossa SOL. Here in presenting a case of 31 year old female presented with complaints of headache, vomiting, visual disturbances & swaying. Radiological investigation revealed tetraventricular dilatation with disproportionate 4TH ventricular dilatation. Initially right Ventriculoperitoneal shunt was done with which lateral and 3rd ventricles were well decompressed. Post op scans showed Isolated fourth ventricle dilatation. Posterior fossa exploration done which revealed a cyst for which fenestration was done. This case is presented for the occurrence of trapped fourth ventricle in a patient with no previous lateral ventricle shunting or infection or inflammation sequelae.

10

A RARE CAUSE OF RAISED ICP

Pradeep B, Balamurugan , Institute of Neurosurgery, Madras Medical College and RGGH, Chennai

In this case report we present a 41 year old female patient with signs and symptoms of raised intra cranial pressure, diagnosed as Lhermitte-Dulcos Disease, a rare cerebellar disorder characterised by hypertropy of cerebellar hemispheres. Pathologically it is described as dysplastic gangliocytoma. Neuroimaging plays vital role in diagnosis of Lhermitte dulcos disease. Clinical symptoms are usually due to mass effect and secondary obstructive hydrocephalus. Our patient presented with obstructive hydrocephalus and cerebellar signs. We managed the patient with ventriculo-peritoneal shunt. In this report we have discussed pathology, clinical features, characteristic imaging findings and management options for Lhermitte-Dulcos Disease.

11

USE OF SPINAL ANAESTHESIA IN LUMBAR DISCECTOMY– AN EXPERIENCE

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OBJECTIVE

Either general anaesthesia or spinal anaesthesia can be used for lumbar discectomy. The common anaesthetic technique is general anaesthesia. The aim of our study is to study the role of spinal anaesthesia in lumbar discectomy.

MATERIALS AND METHODS

In our study we have included all the 92 patients of lumbar radiculopathy operated in our department 40 patients operated under spinal anaesthesia and 52 patients operated under general anaesthesia during the period of 10 months (March 2017 to Jan 2018). For lumbar radiculopathy either laminectomy and discectomy or fenestration and discectomy were done. The heart rate, mean arterial pressure, blood loss, surgeon's satisfaction, post operative cough and post-operative pain and analgesia use were recorded.

RESULTS

In our study of 92 patients, out of 40 patients operated under spinal anaesthesia 38 were males and 2 were female, out of 52 patients operated under general anaesthesia 35 were males and 17 were females. Intra-operative blood loss and intraoperative blood pressure and heart rate changes were less

in the patients operated under SA than operated under GA. Almost all the patients operated under GA had mild to moderate cough and throat discomfort. Post-operative analgesia requirement was also less for these patients than patients operated under general anaesthesia. Except patient discomfort due to position in 3 patients especially female patients operated under SA. Even though our hospital is a non-paying hospital the OT expenditure for anaesthesia under spinal is about TEN times LESS.

CONCLUSIONS

Our study showed spinal anaesthesia as effective as general anaesthesia, and provides effective post-operative analgesia and avoids post intubation complications like cough and chest discomfort and significantly cost effective.

12

EARLY CLINICAL AND RADIOLOGICAL OUTCOME IN ATLANTO-AXIAL DISLOCATION SURGERIES, AN INSTITUTIONAL EXPERIENCE

Ramesh A S, Sathiyajith Rabha, Roopeshkumar V R, JIPMER, Pondicherry

Aim

The objective of this study is to analyze early (within a week) postoperative clinical and radiological outcome in patients with Atlantoaxial Dislocation (AAD) resulting from varied etiopathology following stabilization by current surgical techniques.

Materials and methods

This study was designed in a retrospective, longitudinal and descriptive manner, with deliberate interventional study of all patients. All consecutively operated patients of AAD with upper age limit of 65 years, having complete clinical and radiological medical records in our Institute were included in this study. Patients who had undergone transoral odontoidectomy were excluded. Atlantodental interval more than 3mm in adults and 5mm for children were considered as atlantoaxial dislocation. AAD was considered reducible with the alignment of C1-C2 on extension or traction. Clinical and radiological data were collected from department medical records. Three parameters were studied: Nurick grade, Atlantodental Interval (ADI) and Effective canal diameter (ECD) at the level of C1.

Results

Twenty-five patients who had complete clinical and radiological records were included in this study. We couldn't find significant neurological improvement by using Nurick grading system in the immediate postoperative period. We found statistically significant improvement in ECD and ADI. Duration of symptoms, Canal diameter and ADI changes were not significantly correlated with Nurick grade changes.

Conclusion

Effective Canal Diameter (ECD) may be a useful parameter to assess the radiological improvement in the immediate postoperative period following surgery for AAD. Further studies will highlight whether measurement of ECD can be a used as a radiological marker for the assessment of outcome in AAD surgery

13

EVOLUTION OF SPINAL SURGERY AS SEEN BY MYSELF IN THE LAST 35 YEARS

Vijaya G, Consultant Neurosurgeon, Sri Narayani Hospital and Research Center, Vellore

Today spinal surgery has become an art with micro discectomy, endoscopic discectomy, instrumentation and stabilization and non-invasive techniques. The journey from simple localization to myodil myelography, then CT scan and MRI have made it a wonderful sub specialty would like to highlight some lighter moments of earlier investigative techniques to be recorded in history.

14

SYMPTOM ANALYSIS IN A SHORT SERIES OF SPINAL SPACE OCCUPYING LESIONS

Madhan S, Rajkumar R, Devanand Senthil Kumar, Institute of Neurosurgery, Madras Medical College and RGGGH, Chennai

INTRODUCTION

Symptoms of spinal SOL range from pain, motor weakness, sensory disturbances to bladder & bowel disturbances.

AIM

Aim of this study is to analyse , compare & contrast the clinical presentations, pre-op diagnosis & management of spinal SOL in a short series of cases managed by us over a period of 3 months between December 2017 & February 2018.

MATERIALS & METHODS

In our series of 8 patients 5 were female & 3 were male. Out of 8 patients 3 patients presented with weakness , one presented with sensory symptoms & weakness, 4 presented with local pain & weakness, 3 patients had urinary symptoms & 4 had bowel symptoms. All the patients underwent surgery and HPE was done. HPE turned out to be Ependymoma in 2 cases, secondary deposit from an unknown primary in 1 , Schwannoma in 1, Round cell tumour in 1, Psammomatous meningioma in 1 & Tuberculoma in 1 case.

CONCLUSION

There is a significant variation in the clinical presentation of the cases in our series vis a vis pain, motor symptoms, sensory symptoms & sphincteric disturbances. Most of the cases didn't follow the classical clinical progression of intramedullary or extramedullary tumours. Meticulous clinical evaluation and careful interpretation on radiological investigations will go a long way in avoiding surgical surprises and better surgical planning and outcome.

15

POSTERIOR-ONLY APPROACH FOR THORACO-LUMBAR VERTEBRAL BODY PATHOLOGY - OUR EXPERIENCE

Poonam M, Department of Neurosurgery, VHS Chennai

Thoraco-lumbar pathologies have traditionally been considered difficult to address on account of multiple anatomical factors namely encasement with the rib cage and presence of thoracic and

abdominal viscera and great vessels in close relation to it. A number of approaches have been described to address the thoarco-lumbar pathologies each having its own advantages, disadvantages, scope and limitations. These approaches include anterior, antero-lateral, postero-lateral and posterior to name a few. As a general rule of thumb anterior pathologies warrant use of an anterior or antero-lateral approach. These approaches however carry with them morbidity of a more drastic surgical exercise and risk of injury to various pleural, peritoneal and retro-peritoneal structures. Of late there has been a trend to address anterior pathologies via posterior only approach due in part to advancement of instrumentation. Here we present our experience with the same approach in a series of 6 patients at our institution.

Materials & Method

From April 2017 to October 2017, 6 patients with anterior thoraco-lumbar pathologies associated with or without neurological deficits in our institution underwent a single stage posterior approach for spinal canal decompression in combination with stabilization. All patients were assessed using the American Spinal Injury Association Impairment Scale for neurological deficits and Visual Analog Scale for pain. The operative technique includes resection of the posterior elements, partial or total resection of the anterior elements including vertebral corpus and disc, and stabilization with expandable cage and posterior instrumentation with pedicle screws.

Observation

All 6 patients underwent posterior only approach and stabilization with expandable cage and pedicle screws. The alignment of cage was found to be satisfactory in all cases. The average visual analog score for these patients was 3. 6 and all patients were mobilized on 3rd post-operative day. None of the patients had any post-operative deterioration. The amount of operative time was reduced although the data set was too small to be statistically analyzed. No post-op pneumonia, pneumothorax, pleural effusion, ileus, any retro-peritoneal injury or DVT developed in any patient.

Conclusion

Our experience with the posterior only approach using pedicle screw fixation and an expandable cage proves that it is a safe and viable technique & reduces the morbidity associated with the anterior approaches.

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A SHORT SERIES OF CASES OF CERVICAL VAGAL NERVE SCHWANNOMA

Nihal Ahmed, Raghavendran R, Institute of Neurosurgery, Madras Medical College and RGGGH, Chennai.

Schwannoma of the vagus nerve is a benign tumor that usually presents as an asymptomatic slow growing mass, and its occurrence in the neck is rare (2-3%). They usually present as an asymptomatic, well-circumscribed, encapsulated mass growing slowly at a rate of approximately 2. 5 mm to 3 mm per year. The carotid artery and internal jugular vein may be displaced antero-laterally. Definitive pre-operative diagnosis may be difficult.

We present two such cases of vagal nerve schwannomas operated in our institute over a period of one year. The need for reporting such rare cases arises from the fact that surgeons need to be aware of the diagnostic work-up and differential diagnosis of a neck mass, the surgical treatment, and the postoperative complications. Preoperative planning is also important. The prognosis of schwannomas after complete excision is good, and recurrence is rare.

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HIGH GRADE L5-S1 LISTHESIS – A SINGLE SURGEON EXPERIENCE

Irwin P T, Muralidharan V, Swaminathan G, Vivek Joseph B, Department of Neurological Sciences, Christian Medical College, Vellore

Aims & Objectives

To study the short term outcome in patients with high grade (Meyerding classification grade 3 and more) L5-S1 listhesis treated by a single surgeon in our institution. The grade of listhesis, sagittal balance, clinical features, surgical management & outcomes were studied.

Materials & Methods

This retrospective study included all consecutive patients with high grade L5-S1 listhesis who underwent surgery by the senior author from 2014 to 2018. Clinical records, imaging & outpatient department visits were used to collect the data.

Results

There were a total of 5 patients who underwent surgery in the study period. The age at presentation ranged from 8 - 54 years (mean 24. 4, median 16). Majority were females (80%). Common presentations werebackache (80%), leg pain (100%), claudication pain (100%), motor deficits (80%), and positive SLRT (75%). Surgical procedures were L4-S1 fusion (40%) and L4-pelvic fusion (60%). 3 patients had grade 3, and 1 each had grade 4 and 5 listhesis respectively. Post operatively, 3 cases reduced to grade 1, and 2 cases reduced to grade 2. The pre operative slip angle ranged from 10.6 - 58.2 degrees (mean 26.56) and the post operative slip angle ranged from 0.5 - 22.7 degrees (mean 9.48). The preoperative sagittal balance (n=4)ranged from -65.7 to +93.5 mm (mean 15. 34) and the post operative sagittal balance (n=5) ranged from -25.2 to +93.15 mm (mean 10.63). Post operatively all patients had improvement in their presenting symptoms. Two patients had transient neurological deficits which improved in the subsequent follow up visits. Short term follow up (n=5) ranged from 7 days to 13 months (mean 19.4 weeks).

Conclusions

Surgical reduction and fusion for high-grade L5/S1 listhesis (grade 3 and above) gives good radiological and clinical results. Long term follow up is being done to ascertain if the radiological and clinical improvement persists.

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CERVICAL DUMBBELL TUMOURS: SINGLE STAGE COMBINED APPROACH AN OVERVIEW

Waseem Ahamed T P, Venkatesh R, Department of Neurosurgery, Coimbatore Medical College Hospital, Kovai

Introduction

Dumbbell tumours of the cervical spine can present considerable management challenges related to adequate exposure of both intraspinal and paraspinal tumour components, potential injury to vertebral artery and spinal stability.

Aim and Objectives

To evaluate and design a treatment strategy for cervical dumbbell neurinoma.

Materials and Methods

A study of five cases of of cervical dumbbell tumours who underwent surgery through a combined, standard posterior and an anterolateral neck approach were conducted. Initial posterior approach was conducted with patient prone, midline vertical incision, proceeded with laminectomy, unilateral facetectomy and micro neurosurgical excision of intraspinal component. Patient was then turned supine and tumour approached through a anterolateral neck incision. Sternocleidomastoid was divided in two cases and the nerve roots were preserved in all five cases.

Results

Gross total resection of tumour were possible in all five cases with this approach, with no residual weakness and postoperative spinal instability. All cases were performed in a single sitting and under same anaesthesia.

Conclusion

A single stage combined approach will be an ideal surgical procedure in selected cervical dumbbell tumours. In resource limited setting a single stage procedure, with no requirement for spinal stabilisation has its advantages. Anterolateral neck approach and surgical knowledge will be an added advantage in the neurosurgeons armamentarium.

19

EXTRADURAL CAVERNOUS HEMANGIOMA

Nirmal Kumar S , Mohanraj G, Poongodi S, Ganapathyvel Kannan M, Rajasekharan G, Department of Neurosurgery Madurai Medical College

Cavernous hemangiomas of spine are very common lesions. The usual locations are the vertebral body and the intramedullary region. Here we are presenting 2 rare cases of nonvertebral body cavernous hemangiomas in the extradural location presenting as compressive myelopathy. Only 100 cases of extradural cavernous hemangiomas have been reported in the literature so far. These 2 cases have been presented for their rarity.

Case 1

Insidious onset gradually progressive asymmetric spastic paraparesis with involvement of B/L spinothalamic tract , postr columns below D12 dermatomes with no bowel and bladder involvement.

MRI DL spine – T1 hypointense and T2 hyperintense lesion at D9 level at extradural location exiting right side neural foramen and compressing cord and causing intramedullary signal changes s/o extradural SOL.

Case 2

Insidious onset gradually progressive asymmetric spastic paraparesis with involvement of B/L spinothalamic tract , postr columns below D11 dermatomes with no bowel and bladder involvement.

MRI DL spine

T1T2 hyperintense lesion at D9 level in extradural location causing compression of cord and exiting through b/l neural foramen s/o extradural sol. HPE reported as cavernous hemangioma.

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PRIMARY CHONDROSARCOMA

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Primary chondrosarcomas are rare, accounting for less than 0.%. Chondrosarcomas are malignant tumors characterized by their pure cartilage differentiation. They are the third most common primary malignancy of one after myeloma and osteosarcoma. The majority of chondrosarcomas occur in the proximal long bones, with only 2%–12% of primary chondrosarcomas arising in the spine Patients with spinal chondrosarcomas typically present with pain and neurological deficits. The mainstay of treatment is complete surgical excision of the lesion, with limited benefit from adjuvant therapy using current treatment paradigms Prognosis is therefore largely determined by the histological grade and extent of resection, with higher-grade lesions being associated with a 53% five-year survival rate. Of the different morphological types of chondrosarcoma affecting the spine, intradural myxoid chondrosarcoma appears to be the rarest; we describe the case of a 17-year-old female with high-grade meningeal myxoid chondrosarcoma of the spine. We discuss the current management protocol and options available in treating spinal chondrosarcoma.

CASE SUMMARY

A 17 year old female , with insidious onset gradually progressing pain with radiation to R back. With asymmetric R>L , distal>proximal , sudden spastic type of weakness involving both lower limbs with involvement of spinothalamic tract , posterior columns& sensory loss below the level of D4 with hyper reflexia lower limb bowel, bladder involvement , no autonomic symptoms , no cerebellar involvement or involuntary movements.

DIAGNOSIS

Chondrosarcoma of D2 pedicle with compression spinal cord extending intoR 2nd rib

PROCEDURE DONE

R Poster lateral thoracotomy and wide local excision of tumor, laminectomy and decompression of D2 done. Biopsy – High grade myxoid type chondro sarcoma. Post op RT given.

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TWO INTERESTING CASE OF PRIMARY VERTEBRAL TUMORS

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INTRODUCTION

Primary extradural tumors of the spine comprise only 5% percentage of all spinal tumors. However, given their relative radio resistance and their typical malignant pattern, invasive nature, surgery may be associated with fairly high morbidity and mortality rates. Furthermore, it may be especially difficult to achieve gross total resections with tumor-free margins.

CASE REPORT

CASE 1 : 18year old man with complaints of neck pain and weakness of right upperlimb. month CT /MRI-CSPINE showed multi loculated large expansile lytic lesion involving body lamina right pedicle from c3 to

Results & Conclusion

Abscesses in the intramedullary are rare and have various forms of presentations. Early diagnosis and intervention are imperative as these are one of the potentially curable causes of paraparesis.

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OUR INSTITUTIONAL EXPERIENCE ON ETV IN HYDROCEPHALUS

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Aim and Objectives

The purpose of this study is to determine the success rate of endoscopic third ventriculostomy (ETV) in the treatment of obstructive hydrocephalus in our Institution, to identify the rate of shunt conversion and to compare the effectiveness and complication rates of ETV in those patients with a previous shunting procedure.

Materials and Methods

Following the procedure of endoscopic third ventriculostomy, postoperative clinical assessment and radiological indices were followed up at 48 hours, 1 week, 4 weeks, 3 months after surgery. Patients who failed to show any clinical improvement after endoscopic third ventriculostomy, underwent alternative cerebrospinal fluid drainage procedure. Radiological indices analysed were Evans ratio, third ventricular width, temporal horn size and periventricular lucency

Inclusion Criteria

1. Patients with hydrocephalus secondary to posterior fossa lesions, CP angle tumours, pineal tumours and aqueductal stenosis.
2. Patients with hydrocephalus due to NPH and sequelae of meningitis.
3. Patients with VP shunt dysfunction

Exclusion Criteria

Patients presenting to emergency department with very poor GCS irrespective of the etiology of hydrocephalus and those with IVH and remote head injury.

Results

The success rate in this study was 74.2%. The best effectiveness was observed in, aqueductal stenosis (85%) , brain tumors (77%) ventriculoperitoneal shunt dysfunctions (75%), post TB meningitis hydrocephalus (66%). NPH had a success rate of 55%.

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INTRACEREBRAL MUCORMYCOSIS

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Purpose

To report a case of pure intracerebral mucormycosis with no nasal or para nasal sinus involvement.

Summary of the background

Exclusive intra cerebral form of mucormycosis is a very rare entity.

Methods

60 yr. old diabetic male presented with left hemiparesis. Ct brain showed a right frontal hypodense lesion adjacent to motor cortex with peri lesional edema. Mri brain showed a ring enhancing lesion with hypointense centre with edema. Patient underwent right frontal craniotomy and complete excision of lesion.

Results

The post operative period was uneventful. Pt had recovered from the preop neurological weakness. HPE reported as mucormycosis. CT PNS did not show any evidence of nasal or para nasal sinus involvement. Pt was started on oral podaconazole for 4 weeks.

Conclusion

We report a rare case of exclusively intra cerebral form of mucormycosis with no nasal or sinus involvement.

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SURGICAL CHALLENGES IN MORQUIO SYNDROME

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Morquio syndrome also known as Morquio-Brailsford Syndrome caused by Mucopolysaccharidosis IV. It is a Lysosomal storage disorder caused by deficiency of the enzyme N-Acetyl Galactosamine 6-Sulphate Sulphatase. It is a Multisystemic disorder Morquio syndrome also known as Morquio-Brailsford Syndrome caused by Mucopolysaccharidosis IV. It is a Lysosomal storage disorder caused by deficiency of the enzyme N-Acetyl Galactosamine 6- Sulphate Sulphatase.

It is a Multisystemic disorder mainly affects pediatric age group but manifests primarily as a Progressive Skeletal Dysplasia. Spinal involvement in Morquio syndrome causes major mortality and morbidity by affecting the quality of life. Early diagnosis by proper investigations and timely interventions are critical in preventing or arresting neurological deterioration. In this paper we discussed our experience in the management of two patients with Morquio syndrome.

The relative utility of Radiography (X-Ray), Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) for the evaluation of Upper Cervical Spine instability, Spinal Canal Stenosis and Cord Compression is discussed. Surgical interventions, Anaesthetic consideration, Positioning the patient on Operating table, difficulties in instrumentation faced during the procedure and post operative follow up are discussed. mainly affects pediatric age group but manifests primarily as a Progressive Skeletal Dysplasia. Spinal involvement in Morquio syndrome causes major mortality and morbidity by affecting the quality of life. Early diagnosis by proper investigations and timely interventions are critical in preventing or arresting neurological deterioration.

In this paper we discussed our experience in the management of two patients with Morquio syndrome. The relative utility of Radiography (X-Ray), Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) for the evaluation of Upper Cervical Spine instability, Spinal Canal Stenosis and Cord Compression is discussed. Surgical interventions, Anaesthetic consideration, Positioning the patient on Operating table, difficulties in instrumentation faced during the procedure and post operative follow up are discussed.

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ACUTE BACTERIAL MENINGITIS AS A PRESENTING FEATURE OF PITUITARY MACROADENOMA

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Objective

To present a case of pituitary macroadenoma with initial presentation of acute bacterial meningoencephalitis with short review of literature.

Case report

A middle aged male presented with fever, headache, photophobia, altered sensorium of 2 days duration. On examination, patient had features of acute meningitis. Lab investigations showed polymorphic leucocytosis and CSF analysis showed features of bacterial meningitis. Imaging showed invasive pituitary adenoma with suprasellar, parasellar and sphenoid sinus invasion. Patient improved on antibiotics. Patient had no previous history of CSF rhinorrhea. complete harmonal profile showed panhypopituitarism. Transphenoidal subtotal excision of adenoma was done and the thick adherent capsule was only partially removed. Patient had no CSF leak and was discharged.

Conclusion

Though acute bacterial meningitis is a rarer complication of macroadenoma than pituitary apoplexy, it should be suspected in invasive lesions extending into sphenoid sinus.

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Brain Attack Advancements in Prevention & Surgery

Mani Arumugham, Consultant Neurosurgeon, Retna Global Hospitals, Tiruchirapalli.

The understanding and protocols of Stroke Management the world over has reached new heights. Having been fortunate to attend the UCLA neurosurgery dept. recently as a guest faculty, I witnessed the working of the Stroke team including their Rounds, Discussions, Theatre & Symposiums.

My paper highlights their newer advancements like dedicated Stroke team, Mobile CT unit, telemedicine communication, on-site Intravenous & DSA guided thrombolysis , and minimally invasive Surgical options. These are compared to what is available in our country, the pitfalls and results. Though due to financial constraints it will take a long time to reach their standards the author suggests simple ways to narrow that gap.

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ASYMPTOMATIC MASSIVE CEREBRAL ABCESS FOLLOWING MALIGNANT CEREBRAL INFARCT – AGGRESSIVE SURGERY – A RAY OF HOPE

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Aim

To present a rare potentially life threatening complication of malignant cerebral infarct turning into a massive cerebral abcess.

Introduction

Cerebral abcess complicating cerebral infarction is rare. Only 13 cases have been reported. Unexplained fever is the presenting symptom. Our case is unique, as the patient was totally asymptomatic and the abcess was detected incidentally during surgery.

Case report

42 yrs/M with malignant Lt. ACA & MCA territory infarct underwent decompressive craniotomy 5weeks ago, had features of sunken skin flap syndrome. So cranioplasty was planned. During surgery, false dura was inadverdently opened due to adherence with pia and pus started coming out. On exploration, about 150ml of pus evacuated. The whole infarcted brain was seen to be converted into a cavity full of pus. Adequate drainage and debridement done. Cranioplasty deferred. Patient treated with broad spectrum antibiotics postoperatively and patient recovered well.

Discussion

CVA is one among the common causes for motality and morbidity worldwide. The infarcted or ischemic brain acts like a fertile ground for the pathogens to grow. Disruption of blood brain barrier, lack of normal blood flow by the vascular event facilitates microbial seeding and formation of cerebral abscess.

Conclusion

Though rare, abcess formation following stroke is a reported entity. It could prove to be fatal, if misdiagnosed or not properly treated. Uncontrolled fever in a stroke patient should raise the suspicion of this rare complication. A routine contrast CT brain prior to cranioplasty may pick up this complication in asymptomatic patients. Conservative treatment alone proves fatal in almost all cases.

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ACUTE SUBDURAL HEMATOMA AFTER RUPTURED AVM IN A NINE YEAR OLD CHILD-REPORT AND REVIEW

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AIM

Arteriovenous malformation in paediatric population is rare accounting to 3% of total avm. Bleeding in paediatric age group is common.

MATERIALS AND METHODS

9 year old girl presented with sudden severe headache followed by seizures. She presented to the emergency department in stuporous state with pupillary asymmetry. CT brain revealed acute subdural hematoma with midline shift. Patient underwent emergency craniotomy with SDH evacuation. She was evaluated with CT angiogram brain which revealed a frontal basalAVM with feeder from middle cerebral artery and draining into superficial sylvian vein. Excision of AVM was done.

RESULTS

Patient made a good recovery and biopsy confirmed AVM

CONCLUSION

AVM in paediatric population is rare and are notorious for bleed. AVM presenting as subdural hematoma is still rarer. High index of suspicion in the absence of coagulation abnormality will clinch the diagnosis and a proper treatment.

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GIANT CEREBRAL AVM –A REAL NEUROSURGICAL CHALLENGE

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Background

Management of Giant cerebral arteriovenous malformations is still the neurosurgeons challenge.

Object

To share the experience of microsurgical excision of giant cerebral AVM in our setup.

Methods

24 years old female presented with sudden onset of altered sensorium and right hemiplegia. GCS 8/15. CT Brain shows left frontoparietal ICH.D CT angiogram of brain reveals left parietal AVM, Spetzler-Martin grade 5, measuring 6.x1.x1. cm.

Results

Left frontotemparoparietal craniotomy and evacuation of ICH and excision of AVM was done. Neurological condition of the patient was improved. Surprisingly, post operative 3D CTangiogram of brain shows residual nidus. Redo surgery was done and the residual nidus was excised. Patient was discharged with GCS15/15 and power 4+/5 on right side.

Conclusion

Whenever possible microsurgical excision is the best option for the management of giant cerebral AVM.

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A RARE CAUSE OF SUB ARACHNOID HEMORRHAGE AND ITS UNCOMMON COURSE

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Spontaneous vertebral artery dissection (VAD) is a rare condition which account for nearly 5% of lethal subarachnoid hemorrhage (SAH) and treatment guidelines are nonexistent. Rebleeds occur in 30% of patients with intracranial vertebral artery dissections, initially presenting with SAH and hence were therapeutically occluded.0% of vertebral artery dissections involve both the extracranial and intracranial portions and the existing literature on extracranial dissections of carotid and vertebral arteries does not suggest a risk of bleeding, and there is no scientific rationale for arterial occlusion (or surgery) in such cases. The natural history of such extracranial vertebral dissections, which is much better known for the carotid artery, is that they resolve or improve in almost 50% of cases, and when they persist, they don't rupture. And very few reports of spontaneous occlusion at the presentation of these vertebral artery dissections with SAH were reported.

Here we report a 66 years old female patient who presented with sudden rapid deterioration of sensorium, in GCS 3/15 and CT brain showing diffuse SAH with IVH and dilated ventricles - WFNS/ HUNT&HESS GR V; FISCHER GR IV; Emergency External ventricular drainage was done and resuscitated; CT angiogram showed diffuse vasospasm and absent flow in right vertebral artery; DSA showed dissection and spontaneous complete occlusion of extracranial portion of right vertebral artery; MRI done after stabilisation showed residual SAH, IVH, severe stenosis in the basilar artery and V 4 segment of bilateral vertebral arteries with no collaterals, No evidence of ischemia and No hydrocephalous. After a slow recovery in second week, EVD was closed and removed after observation and patient was planned

for repeat angiogram. But patient had a sudden deterioration; repeat EVD was done which revealed rebleeding and patient succumbed.

Vertebral artery dissection presenting with subarachnoid haemorrhage is a rare condition, with a high rate of rebleeding, resulting in high morbidity and mortality. It carries a bad outcome above that of a ruptured saccular intracranial aneurysm. Therapeutic strategies reported in the literature, which rely on clinicians' personal experience, range from aggressive surgical and/or endovascular modalities to medical therapy, and even include no treatment at all. Some of the patients who presented with such lesions received no treatment due to the following reasons: benign presentation, poor clinical condition on arrival or after recurrent bleeding, absence of collateral circulation, or delayed diagnosis. Spontaneous occlusion, a rare manifestation of ruptured vertebral artery dissection (VAD), is a rather insecure form of 'auto-treatment'. Its natural history and treatment strategy have yet to be established due to its rarity.

Our report of this patient is one of the rarest conditions of an extracranial spontaneous dissection and spontaneous complete occlusion without recanalisation of the vertebral artery presenting as subarachnoid hemorhage and having delayed rebleeding and poor outcome; probably suggesting the role of early aggressive therapeutic occlusion even in these situations.

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ICH IN EARLY INFANCY

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A 38 days old second born male child who is presented with convulsion two episode and refusal of feed. Baby was admitted in paediatric ICU and he was stabilised and investigation was carried out.

CT Brain : Left Temporal parietal mixed dense lesion with surrounding hyperdensity with perilesional edema with effacement of ipsilateral ventricle.

Patient was planned for craniotomy and excision of the lesion. Procedure was carried out under GA and adequate decompression also done.

HPE : Organising intracranial haematoma with inflammatory reaction and no evidence of malignancy.

His post op period was uneventful. The patient was discharged after SR.

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AN INTERESTING CASE SERIES OF VASCULAR MALFORMATIONS PRESENTING AS SEIZURES

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This is a report of series of patients presented to our department with recurrent seizures with differing clinical spectrum and semiology. On workup, all of them turned out to be vascular malformations of differing types occuring at different sites intracranially. All of them underwent surgical management and were relieved of the seizures. This report also discusses the review of literature on the clinical presentation, pathology and surgical management of vascular malformations presenting as seizures.

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ANTERIOR COMMUNICATING ARTERY ANEURYSM AN INSTITUTIONAL EXPERIENCE

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Aim

To study the anatomical variation of its size, projection of dome and its surgical importance of anterior communicating artery aneurysms presenting in our institution

Method and Result

10 Patients admitted and referred to neurosurgical department of GRH with c/o headache and altered sensorium, paucity of movements UL and LL from the period of 2016 - 2018. They were managed in ICU and investigation was carried out. CT angio was done shows A. comm aneurysm with SAH around basal cistern and subarachnoid space. The patients underwent craniotomy and clipping of A. Comm aneurysm.

Observation

In this study we experience the difficulty in regarding surgical management of A. comm aneurysm regarding with its size, projection of dome and its anatomical variation.

Conclusion

In this paper presentation the institutional experience of A. comm aneurysm with variable surgical difficulties regarding its anatomical variation.

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ICG VA IN ANEURYSMS

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Microscope integrated near infrared ICG VA is a new technique of blood flow measurement. This method is simple, fast, reliable, and provides real time information. It has been increasingly utilized to confirm optimal clip positioning across the neck, to evaluate the patency of adjacent vasculature and potentially obviate the need for intra operative and post op DSA.

Aim of study

To determine whether finding on ICG video angiography correspond to relevant finding on post op DSA study { like complete aneurysm occlusion, neck remnants, occlusion or stenosis of parent and branching arteries}.

Method

Prospective study includes 30 patients of complex intracranial aneurysm from 2016 to 2017. Patient characteristics, presentation details, operative reports, and post clipping angiographic images were reviewed to determine the adequacy of the clipping.

Result

30 patients underwent clipping with ICG and postoperative DSA: 36 aneurysms were clipped; 27 patients presented with subarachnoid hemorrhage. aneurysms demonstrated a residual on DSA not identified

on ICG (residual sizes ranged from 0 to 4 mm; average size: 1 mm). Postoperative DSA demonstrated no branch occlusions. patient post operative clinically insignificant infarct.

Conculsion

ICG VA is useful in microsurgical clipping of intracranial aneurysm to ensure the patency of parent as well as branch vessels & completeness of aneurysm & is very useful in reducing postoperative complication & morbidities. But Currently, we believe that the combination of intra operative ICG angiography and postoperative DSA should be used to ensure a complete obliteration of clipped aneurysms to identify pitfalls of ICG VA.

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TWO RARE CASES OF INTRA PARENCHYMAL EXTRAVENTRICULAR SUPRATENTORIAL EPENDYMOMAS

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INTRODUCTION

Ependymomas are glial series tumours that can occur throughout the neural axis, usually in close proximity to the ventricles or central canal. While the fourth ventricle is a common location for ependymoma, we present two rare case of an entirely intraparenchymal supratentorial tumour, remote from the ventricular surface, The histological features, which remain identical despite the varied morphology of intraventricular versus intraparenchymal tumours, are also considered.

CASE REPORT

CASE 1 : A 14-year-old girl presented with progressive symptoms of increased intracranial pressure of 1 month duration. CT scan revealed a right frontal extra-ventricular space occupying lesion with calcifications. She underwent gross total resection. Histopathological examination was consistent with ependymoma. . Patient is asymptomatic now and under follow up.

CASE 2 : A 11 year old boy presented with headache, vomiting and seizure for 15 days duration. CT scan revealed a left parietal extra-ventricular inhomogeneous space occupying lesion with solid and cystic components with calcifications. He underwent total resection of the solid component. Histopathological examination was consistent with ependymoma- tumor cells are characteristically organized in perivascular pseudorosettes. Eight months later, he presented to us with persistent headache with seizure. MRI brain showed recurrence of the left parietal lesion. The patient underwent surgical revision with total removal of the tumour including the solid component and the cystic one and patient was referred to radiation oncology for adjuvant radiotherapy.

CONCLUSION

As the tumour is amenable to total radical resection, radical surgery alone is an option. The need for postoperative adjuvant therapy has been controversial for supratentorial ependymomas. Postoperativeradiation therapy must be administered in every case of partially resected ependymomas. Adults have a better five-year survival rate than children. When considered together, age at diagnosis

along with extent of the surgical resection was better correlated to outcome. In regards to tumour location, patients with supratentorial ependymomas have generally a better survival rate than patients with posterior fossa ependymomas.

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RESURGERY FOR RECURRENT GBM- AN ANALYSIS AND JOURNEY TO THE CENTRE OF CHANGING PARADIGM OF MANAGEMENT

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AIM

Recurrent GBM poses great challenge to management with no well defined protocol. The diagnosis, classification, treatment of GBM has always been evolving with newer drugs and radiation options and costlier evaluation methods. We analyzed our experience with recurrent GBM and various treatment options.

MATERIALS AND METHODS

A total of 30 patients with recurrent GBM from 2013 till 2017 were studied. Patient age, tumor morphology, location, MIB index and other factors associated with early recurrence studied. Seven patients underwent reexcision. Adjuvant therapy was given after surgery.

RESULTS

Age above 45, solid tumors, temporal location, had disease free survival of 18 months. Reexcision was done in patients with disease free interval of 18 months. We also evaluated the wide treatment option and latest guidelines and our limitation.

CONCLUSION

With newer developments in oncology the paradigm of management of recurrent GBM is always enlarging with increasing cost of treatment. Surgery still offers a safe and cost effective alternative in selected patients.

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SURGICAL MANAGEMENT OF SKULL BASE INTRACRANIAL ROSAI DORFMAN DISEASE: A SERIES OF 5 PATIENTS AND REVIEW OF LITERATURE

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Background and Importance

Rosai-Dorfman disease is a rare benign histiocytic proliferative disorder with a self-limiting clinical course. Skull base Rosai-Dorfman disease presents with intracranial lesions that often mimic

meningiomas and other benign skull base tumors. The disease is difficult to diagnose radiographically and tissue diagnosis exposes patients to significant perioperative risk. Surgical resection may require a large skull base exposure that risks significant surgical morbidity. Aggressive surgical resection, while often attempted, is of unproven efficacy. We analysed the clinic-radiological and pathological parameters of these tumors with functional outcome in these 5 skull base tumors. Our objective was to determine. In addition, we reviewed 39 cases of skull base Rosai-Dorfman disease reported in the literature.

Conclusions

Tumors commonly occur in the sellar/parasellar region and result in loss of vision. Regardless of extent of resection, the majority of patients (>78%) have subsequent tumor regression or stable disease. Steroids and/or radiation are effective treatments for tumor recurrence. Tumor biopsy followed by observation, steroids, and/or radiation may be the most appropriate surgical management of skull base Rosai-Dorfman disease.

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A RARE CASE OF VONHIPPEL LINDAU SYNDROME

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Purpose

Aim is To discuss about the Clinical Presentation and Neurosurgical Management of Rare Case of VonHippel Lindau Syndrome.

Clinical Presentation

41 year old Gentleman presented with C/o. Fever followed by Weakness of right hand – 2 months duration; Weakness of right lower limb – 2 months duration. Neck pain – 1 ½ months duration; Drooping of right upper eyelid – 1 ½ months duration. Asymmetrical Progressive Quadriparesis (Right more than left)with sensory disturbances. Later developed drooping of Right Upper eyelid. History of Multiple Small Swellings all over the body. Family History present. Multiple swellings in forearm and trunk clinically suggestive of Lipoma. Bilateral hydrocele present.

On Examination : Right eye had partial ptosis. Ciliospinal reflex absent on right side. Pupils Right 2. mm RTLLeft pupil 3 mm RTL. Fundus Examination revealed Superotemporal quadrant elevated red lesionin left eye suggestive of hemangioma. Pyramidal Type of weakness. Weakness exagerrated in lower limbs. Abdominal Reflexes absent in right quadrant. Sensation C 2 and below C 2 dminished.

Diagnostic Investigations : MRI of Cervical Spine showed cervical Hemangioblastoma. CT Abdomen showed Pancreatic Cyst. FFA confirmed Hemangioma in Left superotemporal Quadrant.

Patient underwent cervical laminectomy and total excision of SOL. HPE suggestive of Hemangioblastoma. Post operatively weakness and sensory symptoms improved. After discharge patient referred for Ophthalmic Institute for Laser Photocoagulation of Retinal Hemangioma.

Conclusion

Due to a combination of robust radiologic and clinical screening and advanced surgical techniques, the morbidity and mortality of patients with VHL disease has been reduced significantly. Screening is

important especially with those having family history because the lesions in VHL disease are treatable; thus, early detection allows use of more appropriate therapy and may enhance the patient's length and quality of life. A Multidisciplinary team approach is important in screening for VHL disease.

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A PROSPECTIVE STUDY OF SKULL BASE LESIONS IN MY NEUROSURGICAL UNIT

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Aim

To analyse the temporal profile of skull base lesions over a period of two years in my Neurosurgical unit.

Abstract

This is a prospective evaluation of all cases treated in my Neurosurgical unit, which I worked. In the past two years, around 25 cases have been admitted, evaluated and treated surgically. Most of the lesions were operated by endoscopic assisted microscopic trans nasal approach. Some tumours required an additional sub temporal limited craniotomy approach. Histopathology varied from fungal granuloma, chordoma, pituitary adenoma and various malignant lesions. A prospective temporal profile analysis of these lesions, produced surprising results.

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RARE CASE REPORT OF SKULL BASE RHABDOMYOSARCOMA

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18 year young boy presented with acute onset Proptosis of Right eye and diplopia, Anosmia. Examination revealed Right Eye proptosis, RT side eye extraocular movement restricted with anosmia. Imaging showed heteroindense contrast enhancing lesion in nasoethmoid region extending into right frontal region eroding frontal sinus, medial wall of orbit, infiltrating RT medial and superior rectus. Two staged procedure done and total excison of lesion done and HPE revealed Embryonal rhabdomyosarcoma and Cranial RT was completed. Embryonal Rhabdomyosarcoma of skull base with intracranial invasions very rarely reported in the literature.

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BONE SANDWICH CLOSURE TECHNIQUE FOR POSTERIOR FOSSA CRANIECTOMY

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Background

Surgery of posterior fossa including CP angle involve either craniectomy or craniotomy. Traditionally the preferred access has been craniectomy. Although the latter offers an excellent exposure it is believed to carry increased risk of post-operative pseudomeningocele and CSF leak compared to craniotomy.

Methods

We have suggested a technique by which after standard craniectomy for the posterior fossa surgeries the bony defect is covered by gel-foam bone sandwich (GBS) technique. We studied this technique over a period of twenty-five and a half years in 1028 patients.

Results and Conclusion

We analyse the risk of pseudomeningocele and CSF leak in our patients using GBS technique and reviewed literature to compare our outcomes with standard craniotomy and craniectomy procedures.

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RARE SKULL BASE LESIONS – PRESENTATION AND MANAGEMENT

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Introduction

Smaller operative exposures, endoscopic approaches, and minimally invasive neurosurgery have emerged as a dominant trend in the modern era of skull base surgery. While most of the common skull base lesions are being operated with relative safety and efficiency via these strategies, there are a set of very rare skull base lesions that not only demand a very keen and in depth knowledge in skull base anatomy but also a surgical expertise in various approaches for these lesions.

Material and Methods

We analyzed retrospectively the patients who were operated for rare skull base lesions in our institute in the past 5 years. Studied parameters include demographic data along with clinical presentation, radiological characteristics, surgical procedures, intraoperative and postoperative complications and outcome of these patients.

Results

11 patients were included who met out criteria. These patients underwent partial to total excision of the lesions with reconstruction of skull base. All these patients had different pathologies.

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ORBITAL TUMOURS – CASE PRESENTATION AND REVIEW OF SURGICAL APPROACHES

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INTRODUCTION

A variety of lesions can affect the orbit. These lesions have variable clinical manifestations, operative indications, and treatment options. Advances in imaging and surgical approaches have significantly changed the management of orbital lesions. Various Classification are there based on origin, histology, and sugery. Intraconal tumors are usually presented with early visual loss, impairment of mobility, axial proptosis. Extraconal tumors presented as early nonaxial proptosis and intracanalicular or apical tumors leads to early loss of vision

Case 1

56 years old female presented with 6 month duration of Right frontal and retro orbital pain and progressive visual deterioration 2 months duration. Clinical examinations revealed axial proptosis and EOM restriction medially with RAPD without any other cranial nerve involvement and motor and sensory

involvement. MRI showed contrast enhanced intral conal tumor in the right orbit. We did right Fronto orbital craniotomy and total excision of tumor and post operative period was uneventful. HPE reported as hemangioma and there was no deterioration in pre op vision.

Case 2

36 years old female presented with left frontal and retro orbital pain and proptosis for 3 months. Already she underwent left lateral orbitotomy and sub total excision of orbital tumor 20 years back. Patient was evaluated tumor was found to be intra conal and left lateral orbitotomy and total excision of tumor was done. Post operative period was uneventful, no visual deterioration and now she also in follow up.

DISCUSSION

The choice of approach depends on the location, size, demarcation, and histologic type of the lesion. The least traumatic approach should be chosen. The procedures that can be performed range from open biopsies for confirmation of a diagnosis to the subtotal resection and the complete excision of well-circumscribed lesions. In general, open operations in the orbit are performed by one of two types of approach transcranial or extracranial. Extra cranial approaches include lateral orbitotomy, supraorbital orbitotomy, transconjunctival, transantral approach. Transcranial approaches include extradural Pterional, intradural Pterional, contralateral Pterional, and Orbitozygomatic approach.

CONCLUSIONS

The optimal surgical approach to the orbit is determined by the lesion's type and location. Surgical planning and the chosen approach should allow tumor removal without significant morbidity. Transcranial approaches are chosen for lesions with retro-orbital, intracranial extension and for lesions involving the optic canal or superior orbital fissure. Purely intraorbital lesions can be reached via numerous less invasive extracranial approaches. Of these, the lateral orbitotomy is still the most practiced, followed by transconjunctival approaches and the supraorbital approach.

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INTRACONAL OPTIC LYMPHOPLASMACYTE-RICH MENINGIOMA A CASE REPORT OF A RARE NEOPLASM

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Introduction

Lymphoplasmocyte-rich meningioma (LPM) is a rare variant of meningiomas accounting for less than 1% of all meningiomas. LPM are rare histological variant of benign (WHO grade I) meningiomas characterised by extensive infiltration of lymphocytes and plasma cells often obscuring the meningothelial component. Intraconal optic lymphoplasmacyte-rich meningioma is a very rare type of meningioma occurring in intraconal compartment and no such cases reported so far in this location.

Case Report

We report a case of 65 year-old male who presented with proptosis with painless loss of vision in left eye with 3 months duration. Histopathology examination revealed a tumor arranged as sheets and whorls of meningothelial cells without any mitoses or atypia, accumulation of numerous large cells with abundant eosinophilic cytoplasm, with foci of diffuse infiltration by Lymphoplasmocytoid cells and intervening adipocytes and small bloodvessels. On immunohistochemistry, tumor cells were positive for Epithelial Membrane Antigen (EMA) and Vimentin. The Lymphoplasmocytic infiltrates contained mixture of CD3 and CD20 positive lymphocytes. Patient underwent transcranial left orbito frontal craniotomy and near total excision of tumor.

Conclusion

Intraconal Optic Lymphoplasmacyte-rich meningioma is a very rare benign variant of meningiomas, featured by plasma and lymphocyte infiltration and often a less proportion of meningothelial tumorous elements. Surgical resection is still the primary treatment. Radiotherapy is not recommended, and Hormone or Immune inhibitor therapy might be helpful.

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A CASE OF SOLITARY SKULL METASTASIS

Anil Kumar J, Department of Neurosurgery, Coimbatore Medical College, Kovai

58 year old female presented with complaints of swelling in the right side of scalp- 1 year. Patient was apparently normal 1 year back when she had a trivial fall she noticed a small swelling in the right side of scalp which was gradually progressive and increasing in size and attained the present size over the past one year.

On examination a single well defined swelling of size 8x5x5 cms over right parietal region with skin over swelling normal no visible pulsation no dilated veins no scar sinus surrounding skin normal. On palpation no warmth no tenderness firm in consistency not freely mobile well defined borders smooth surface pulsation felt and skin is pinchable bony indentation felt.

No thrill or bruit. HPE-Features consistent with metastatic deposit from follicular carcinoma thyroid. Portion of duramater is included and the adjacent bone is invaded by tumor cells

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SURGICAL MANAGEMENT OF PEDIATRIC COLLOID CYST

Ratha V, R. Kumar R, Sankar V, Suresh Bapu KR, Institute of Neurosciences, SIMS Hospital, Chennai

Aim

Colloid cysts of the 3rd ventricle are relatively rare intracranial tumours, more so in children. They are benign tumours with excellent prognosis if diagnosed and treated early. We hereby report a series of four colloid cysts in the pediatric age group.

Materlal and Methods

A retrospective analysis of four cases of colloid cysts in children below 18 years, operated in our institution between September 2015 and November 2017 (2 years) was made. The youngest case was one and half month old and is the youngest case of colloid cyst detected so far. Clinical presentation, radiological findings, surgical approaches and outcome were analysed.

Results

All four patients presented with the features of raised intracranial pressure. All these patients had the characteristic radiological features of a colloid cyst. Of these four pediatric patients, endoscopic removal was done in two and the other two underwent transcallosal transforaminal approach. Of the two patients who underwent endoscopy, one patient additionally underwent septostomy. There were no perioperative complications

Conclusion

Colloid cysts in the young are thought to be more aggressive clinically and radiologically and therefore, early surgical intervention is indicated.

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EFFECTIVENESS & PITFALLS OF FACIAL NERVE MONITORING IN CP ANGLE SURGERY

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Objective

Intraoperative facial monitoring has been established as one of the methods by which can improve surgical results while reducing morbidity. Despite routine use of intraoperative facial nerve (FN) monitoring, FN injury still is a complication of major concern due to severe negative impact on patient's quality of life. Our aim of study to evaluate effectiveness & pitfalls of facial nerve monitoring in CP angle surgery.

Method

Severe IONM techniques have been developed & evaluated with particular focus of 7th CN preservation. Among these method, the most frequently used are EMG for facial nerve monitoring.5 patients from January 2017 to january 2018 included in our study.

Results

Statically analysis still we evaluated.

Conclusion

Our conclusion is facial nerve monitoring is a major concern to preserving post op facial nerve function. There are some technical, interpretive, surgical & some tumor anatomy location correlates necessary for intraoperative nerve monitoring during CP angle surgery.

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DORSAL INTRAMEDULLARY CHORDOMA WITHOUT BONE INVOLVEMENT – A RARE CLINICAL ENTITY

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AIM

To study through an Illustrative case report, the incidence and the rare presentation of a chordoma of dorsal cord without bony involvement.

MATERIALS & METHODS

We present a case report of a 40-year-old man, with progressive spastic paraparesis and difficulty in voiding urine along with erectile dysfunction for 8 months duration. On further examination he had a lower limb power of 4/5 and 3/5 in his right and left sides respectively with exaggerated knee and ankle reflexes. MR Imaging revealed a D11-12 Intramedullary SOL. He was operated for the same and tumour biopsy revealed a chordoma with IHC showing positivity for EMA and S100. Postoperatively the patient improved.

RESULTS & CONCLUSION

Chordomas usually arise along the midline bone from sphenoclival region to the sacral levels, but rarely from an intradural location. Even rarer is an intramedullary location presenting with neurological deficits, with only two reported cases so far in the literature.

We present this case for its rarity.

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RATHKE'S CLEFT CYST

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Rathke's cleft cyst is described as benign intra-sellar cyst. They are mostly small and asymptomatic, but may become large enough to cause symptoms by compression of intra-sellar or suprasellar structures. we report two cases of Rathke's cleft cyst in extreme of age.

First case a 52 year old lady with the complaint of diminision of vision in left eye since one and half months with normal endocrine profile and MRI Brain showing T2 hyperintense space occupying lesion seen in the region of sella pushing the pituitary gland inferiorly with no significant contrast enhancement and a second case of 14 years boy with the complaint of headache and diminision of vision in right eye of 6 years, with poor development of secondary sexual characters and MRI showingT1, T2 hyperintense lesion in sella with suprasellar extension, displacing bilateral internal carotid laterally and optic chiasma superiorly with no enhancement of contrast and calcification along cyst wall and moreover intra operatively showing draining of yellowish cheesy material with cholesterol crystal and calcification of capsule wall while opening the capsule, giving a chance of thinking craniopharangioma as a differential diagnosis but confirmed of rathke's cleft cyst by HPE of post operative spicemen.

First patient regained normal vision and asymptomatic for the past one year. Second patient has the same visual field defect for the past three month, post operative follow-up period but has no headache in this follow-up period.

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AN UNCOMMON SITE OF A COMMON LESION - A CASE REPORT

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INTRODUCTION

Cerebellar medulloblastomas are one of the most common posterior fossa tumours (20-25%) in children. The tumour often arises in the cerebellar vermis and the apex of the fourth ventricle with most being intra-axial. But rarely it arises in the cerebellopontine angle. We present a rare case of primary extra-axial CP angle medulloblastoma. Only 40 cases of CP angle medulloblastomas were reported in the literature.

CASE PRESENTATION

A 10 year old girl presented with progressive left cerebellar dysfuntion, headache and vomiting. MRI showed an extra-axial tumour in the left CP angle without hydrocephalus. Patient has been operated at the age of two and they missed their case reports. They have not gone any adjuvant chemotherapy

at that time. Surgical resection was performed and total tumour removal was achieved. Microscopic examination revealed the diagnosis of medulloblastoma. Patient recovered from her symptoms during her follow up and was transferred for adjuvant chemotherapy.

CONCLUSION

Medulloblastoma is predominantly a childhood tumour that almost always present intra-axially. However, it is important to consider rare possibility of medulloblastoma presenting as an extra-axial lesion in the CP angle. The treatment and outcome of CP angle medulloblastomas are similar to cerebellar medulloblastomas. Its occurrence in the CP angle can confuse the nature of the lesion and affect the surgical planning.

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GREEN LANTERN – NEUROSURGICAL PERSPECTIVE

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Myeloid sarcoma (MS) of the central nervous system (CNS) is a very rare presentation of leukemic mass infiltration outside of the bone marrow. It may involve the subperiosteum and dura mater and, on rare occasions, can also invade the brain parenchyma. The disease is most commonly seen in children or young adults. MS can be seen in patients with acute myeloid leukemia (AML), chronic myeloid leukemia and other myeloproliferative disorders. This entity has the potential to be underdiagnosed if the MS appearance precedes the first diagnosis of leukemia.

The main reason is that their appearance on CT and MRI has a broad differential diagnosis, and proper diagnosis of MS can only be made if the imaging findings are correlated with the clinical history and laboratory findings. Herein, we present a case of 35 year old male presented with cerebellar signs and symptoms and radiological investigation revealed a SOL in posterior fossa. Blood investigations were normal. Tumour resection done and immunohistochemistry proved to be Myeloid sarcoma. In search of literature only one case is documented in posterior fossa location in a previously diagnosed patient with AML. True Chloroma/Myeloid sarcoma of CNS is rarest of rare presentation.

This case is being presented for its rarity of occurrence and to enlighten the entity among the neurosurgeons.

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DIAGNOSTIC UTILITY OF SQUASH CYTOLOGY AND ITS CORRELATION WITH HISTOPATHOLOGY IN NEUROPATHOLOGICAL SPECIMENS

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OBJECTIVE

Squash preparation is simple, rapid, relatively reliable technique for the diagnosis of central nervous system tumors. The knowledge of the squash preparation technique could be beneficial where facility for frozen sections is unavailable. The current study was undertaken to assess the diagnostic utility of squash cytology and to correlate with histopathological diagnosis.

MATERIALS AND METHODS

We prospectively analyzed fifty consecutive neuropathological specimens subjected to squash cytology as well as routine histopathological examination from March 2010 to June 2011. Slides were reviewed by two independent pathologists. Squash cytology findings were correlated with HPE for tumor type and tumor grading wherever possible.

RESULTS

Out of 50 cases, correct HPE correlation was obtained in 37 cases with diagnostic accuracy of 74% and in the remaining 13 cases diagnosis could not be precisely established with squash cytology. The diagnostic accuracy of squash cytology in astrocytoma was 93.3%. However when predicting the grade of astrocytomas, the diagnostic accuracy decreased to 73.3%. Correct grading was possible in 11 cases out of 15. Grade 3 astrocytoma had diagnostic accuracy of 100% followed by grade 2 which had diagnostic accuracy of 80%. In glioblastoma multiformae correct grading was possible only in 5 cases out of 8 with diagnostic accuracy of 62.%.

CONCLUSION

Squash cytology is a sensitive and specific modality for diagnosing histopathological nature of CNS lesions. The method is easy, rapid and inexpensive with the advantage of clearly seen cellular morphology. Despite the advantages, squash cytology should be used as a preliminary investigation and should always be confirmed with routine histopathology. It should never be used solely for diagnostic or therapeutic purposes. In the experienced hands of a pathologist squash cytology is an accurate and reliable procedure for rapid cytological diagnosis of CNS lesions.

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NEUROENDOSCOPIC MANAGEMENT OF ARACHNOID CYST

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Introduction

The arachnoid cyst constitutes about 1% of all intracranial space occupying lesions. It is a benign pathology posing challenge for management of both symptomatic and asymptomatic patients. The indications, optimum time for surgical management, mode of management and the appropriate surgical technique are still debated among the neurosurgeons. We have reviewed four cases of Intracranial arachnoid cysts who had undergone endoscopic cystocisternostomy and their outcome based on clinical and neuroradiological aspects.

Material and Methods

We had analyzed one case each of sylvian fissure, suprasellar, and quadrigeminal and posterior fossa arachnoid cysts. All the cases were managed with endoscopic cystocisternostomy. The patients were followed postoperatively for the clinical and radiological outcome.

Results

All patients had resolution of the symptoms. The volume of the cysts had reduced in the follow up radiological imaging. There was no death or significant morbidity. They did not require further surgical procedures.

Conclusion

The surgical options for the arachnoid cyst management are the microsurgical management, cystoperitoneal shunt placement and endoscopic guided fenestration. The Endoscopic fenestrations are minimally invasive with less morbidity and offers less recurrence rate. But each patient must be assessed on individual basis with regard to the timing and optimal mode of management.

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A RARE CASE OF INTRAVENTRICULAR ATYPICAL MENINGIOMA IN TUBEROUS SCLEROSIS

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AIM

Reporting a case of intraventricular tumour in tuberous sclerosis as a atypical meningioma (grade II)

METHODS

A 19 year old male patient presented with C/O headache and vomiting for past 2 months on and off with papilledema. MRI scan revealed a T1 isointense and T2 heterointense contrast enhancing mass lesion in the frontal horn of left lateral ventricle, extending into the frontal horn of right lateral ventricle through foramen of monro with hydrocephalus. Patient had features of Adenoma sabaceum, Hypopigmented macules, Cortical tubers and Intraventricular SOLin MRI which are in favour of tuberous sclerosis. Patient underwent left VP Shunt followed by near total excision of tumour by interhemispherical approach. Biopsy turned out to be atypical meningioma of rhabdoid variety.

CONCLUSION

In literature only 1 case of choroid meningioma was reported in intraventricular tumour in tuberous sclerosis. This is a second case of intraventricular tumour presenting as atypical meningioma in tuberous sclerosis.

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A NEW SCORING SYSTEM CLASS HSR FOR MENINGIOMAS

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Aim

To determine the correlation of clinicopathologic and radiologic characteristics, predicting the outcome of meningiomas – a new scoring system based on review of literature CLASS-HSR. Introduction

introduction

Meningiomas are benign intracranial extra axial tumors which have unpredictable behavior in terms of recurrence and proliferative potential. The classification and grading of meningiomas did not undergo revision in the WHO 2016 scheme which fails to fully address a variety of critical issues regarding the relationship between meningioma histological characteristics and behavior. Surgical resection is often curative; however, some tumors cannot be entirely resected due to their anatomical location and postoperative remaining tumor cells may develop an aggressive and bone invasive growth behavior. Meningiomas of WHO grade I can, despite their benign appearance, display invasive growth. Today it is not possible to predict which tumors that will develop invasive growth, as there is no histopathologic

difference between invasive and non-invasive. so it is imperative to develop a comprehensive scoring system which can predict outcome in meningioma patients based on CLASS Algorithm, Histopathology, Simpson Grading and Radiology characteristics.

Materials and Methods

A retrospective study based on hospital records and patient follow up who were treated surgically in Institute of Neurosurgery Madras Medical College. Computed tomography (CT) was performed before and after contrast administration in all cases. Magnetic resonance imaging (MRI) including pre- and post-contrast T1- weighted imaging using spin-echo (SE) sequences and T2-weighted imaging using fast spin-echo (FSE) sequences was performed in all cases. Preoperative evaluation done based on CLASS algorithm and intraoperative resection quantified based on Simpson grading. Surgically resected specimen was qualified based on histopathology characteristics and grading was done based on WHO CASSIFICATION OF CNS TUMORS 2016. Early outcome at 6 weeks and late outcome at 12 months was assessed using the Glasgow outcome scale (GOS) [2], and postoperative neurologic and medical complications were recorded. Chi-square and Fisher's exact test were used for the comparison of the groups. A logistic regression model was built to compare each group in terms of the odds of having "bad" GOS (GOS 1–3) and neurologic/medical complications. A p-value of 0.5 and below was accepted as statistically significant.

Result

Fifty cases of meningioma were treated surgically in our hospital between JUNE 2017 and FEBRUARY 2018. Out of 50 patients 20 (40%) female, 30 (60%) were male. Youngest patient age was 10 years and oldest was 75 years. Mean age presentation was 47 years; median age was around 48 years. Seven (14%) were histologically identified as aggressive variant of meningioma. The patients comprised 5 males and 2 females, ranging in age from 10 to 64 years (mean, 47 years). Neurological symptoms such as headache, seizure, cranial nerve deficit, swelling, loss of consciousness, weakness numbness of the extremities was reported. Duration of symptoms ranged from 2 days to 1 year, 24 Cases Were Meningothelial Meningioma 4 Cases Were Psommomatous 1 Microcystic 3 Cases Represented Recurrent Disease Subsequent To Resection of Two Atypical Meningiomas and one Anaplastic meningiomas.

Conclusion

We have developed a comprehensive scoring system for assessing the outcome in meningioma patients which will be helpful to assess and predict the behavior of meningioma in surgically treated patients.

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A RARE PRESENTATION OF NEUROFIBROMATOSIS TYPE 2

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Introduction

Neurofibromatosis type 2 is a rare neurocutaneous syndrome with incidence of 1/25000-1/40000 individuals. Occurrence of Malignant peripheral nerve sheath tumour in NF2 is very rare in patients without previous irradiation. One case has been reported its occurrence inNF2children without previous irradiation. Hence we report this case.

Case Discussion

We report a case of 5 years old female child presented with h/o back pain radiating to both lower limbs since 20days, weakness of both lower limbs for 15 days, left sided facial palsy since 15 days and bowel

and bladder incontinence 1 week. Clinical examination revealed LMN facial palsy on left side, diffuse swelling over lumbar region, and power of 2/5 in both lower limbs. MRI SPINE and brain revealed, bilateral cp angle schwannoma and tumour in dorsolumbar and lumbosacral region with normal hearing on both ears. Patient underwent D 10-L 1, L5-S1 laminectomy and excision of densely adherent tumour. Post operatively patient weakness, bladder and bowel incontinence remain same as in preoperative status. HPE reported as picture in favour of Malignant MPNST-S100 moderately positive and BRAF V600 E point mutation is under study. Patient Planned for adjuvant radiotherapy

Conclusion

MPNST is rare tumour in NF2 even in Paediatric age group without any family history and previous irradiation. It should be investigated.

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A CASE OF SOLITARY SKULL METASTASIS

Anil Kumar J, Department of Neurosurgery, Coimbatore Medical College, Kovai

58 year old female presented with complaints of swelling in the right side of scalp- 1 year. Patient was apparently normal 1 year back when she had a trivial fall she noticed a small swelling in the right side of scalp which was gradually progressive and increasing in size and attained the present size over the past one year.

On examination a single well defined swelling of size 8x5x5 cms over right parietal region with skin over swelling normal no visible pulsation no dilated veins no scar sinus surrounding skin normal. On palpation no warmth no tenderness firm in consistency not freely mobile well defined borders smooth surface pulsation felt and skin is pinchable bony indentation felt. No thrill or bruit.

HPE-Features consistent with metastatic deposit from follicular carcinoma thyroid. Portion of duramater is included and the adjacent bone is invaded by tumor cells.

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WHAT I HAVE LEARNT FROM MY MISTAKE

Ramesh AS, Department of Neurosurgery, Tiruppur

When you make a mistake it's important that you don't fall into the trap of trying to justify your mistake. Mistakes must be embraced not justified or rationalized. Unless you take ownership of your mistakes, you will never truly learn the lessons. You must master to move forward in your neurosurgery practice.

In my first year of my independent Neurosurgical practice I have committed few mistakes and how I talked it and what was the end result and from that what I have learnt is all about my presentation. cases I am going to discuss here.

- A case of type II odontoid fracture where screw went in to wrong trajectory.
- A case of lumbar disc, MLD done, retained disc
- A case of cranioplasty with post op EDH

- A case of hypertensive ICH with left out foreign body
- A case of frontal ICH, wrong side surgery

It's always better to learn from other's mistake than one's own, hence I am discussing this with you.

"To err is human" and "you live and you learn"

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TRAVAILS IN STARTING NEUROVASCULAR SURGERY AT A PERIPHERAL TERTIARY CARE CENTRE

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The Department of Neurosurgery -Thanjavur Medical college which caters the surrounding seven districts for years together has started its neurovascular surgery, principally aneurysm surgeries in the past five years. With the limited manpower, which is predominantly drained towards the immense load of neurotrauma work, this beginning has really met with so many hurdles and tussles.

Availability of necessary infrastructure and equipments, the funding, trained neuroanesthetists/ intensivists, trained paramedical persons, neuroimaging facilities, early referrals and most importantly the difficult learning curve, we have come through so many difficulties in each of these. This paper describes the travails we met during establishing the neurovascular surgeries at Thanjavur medical college.

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A STUDY ON AUTOLOGOUS BONE CRANIOPLASTY

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Aim and Objective

The aim of the present clinical study is to evaluate the efficacy of preservation of calvarial bone in an abdominal pouch for being used later for cranioplasty.

Materials and Methods

All stroke and TBI patients with refractory raised ICP operated with an emergency decompressive craniectomy between July 2007 and Jan. 2017 at a single hospital, were included. After exclusion, a total of 211 patients were taken for consideration and analysis. For the retrospective analysis of the efficiency of autologous bone graft preserved in the abdominal wall, for cranioplasty, All decompressive craniectomy patients who underwent subsequent cranioplasty were identified, and a database was created with relevant variables, including post-operative complications. Age, gender, co-morbidity, indication for DC, method of implanting in abdomen, Operating time, cranial surgery prior to DC, time between DC and CP, complications like implant rejection, SSI, Osteomyelitis, and abdominal wound complications if any, have all been recorded and studied.

Conclusion

We from our retrospective analysis, conclude that storage of the patients own bone flap in the abdominal pocket is a safe, easy, cheap, sterile, histocompatible, and better cosmetic results. When

replacement the bone removed at craniectomy, a fresh skull autograft is superior to all alternative forms of cranioplasty such as methylmetacrylate or metallic prosthesis. When compared to the use of synthetic cranioplasty materials, a personal bone flap has very low percentage of inflammatory complications.

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PENETRATING SKULL FRACTURE - AN INTERESTING PRESENTATION

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Most penetrating skull injuries are caused by gunshot wounds or missiles. The compound depressed skull fracture represents an acute neurosurgical emergency. Management and diagnosis of such cases have been described, but its occurrence following a fall onto a piece of spanner is quite unusual. A 20-year-old male had work spot injury, spanner that penetrated his skull on the frontal region and was treated in our department.

The patient had no neurological deficits during presentation. He was managed surgically and removal of the spanner was performed to prevent early or late infection complications. Foreign bodies often pose a different set of challenges as far as penetrating injuries to the brain are concerned. Radiological difficulties and increased rates of infection due to its nature make these types of injuries particularly interesting. Their early diagnosis and appropriate treatment can minimize the risk of complications.

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CADAVERIC BRAIN DISSECTION ROLE IN NEUROSURGERY RESIDENT TRAINING

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Aims & Objectives

To discuss the advantages of performing cadaveric brain dissection for learning anatomy and its variations for neurosurgery residents and to promote the practise in a forum of policy makers.

Introduction

The first recorded human dissection took place around 300 BC and cadavers dissection have been used in education since 16th century. As technology is changing the way anatomy is taught is changing but technology cannot replace the numerous advantages hands on dissection has to offer. The main objective of cadaveric dissection is for residents to identify major external and internal anatomical structures of the brain and to learn the circulatory system of the brain, major sensorimotor pathways, and it simulates micro neurosurgical dissection. Micro neurosurgical dissection along posterior fossa cistern and cranial nerve dissection when emerging from brain stem provides insight into the complex anatomy of the region. Anatomically we are all unique, these variations do not appear in virtual reality applications and the same can be explored in cadaveric dissection and the resident can begin to appreciate which are clinically relevant.

Materials & Methods

Fresh adult brains from cadavers of both sexes examined in the autopsy room in the department of forensic medicine, Coimbatore Medical College and hospital, Coimbatore. Standard verniar caliper with accuracy of 0 mm used for measurements of vascular structures, tentorial hiatus, surgical landmarks.

When cadaver are brought for postmorterm examination, as a routine method of forensic cadaveric examination, the bicoronal scalp incision made. The skull skeletonised and drilled and the base of the brain dissected. The circle of Willis visualized and dissected. Then the brain dissected from the cranial cavity without disturbing the vascular system. Then the specimens are studied, examined for variations. Vascular anatomy is better delineated with injecting diluted poster colour into the vascular structures.

Storage and Disposal

After studying fresh brain specimen from the each cadaver, the brain specimen would be handed over to the department of forensic medicine. Sample Pictures taken during cadaveric dissection

Conclusion

Cadaveric dissection in fresh brain specimen is an easy, effective and replicable way to train resident neurosurgeons. No additional facilities are needed for the same. The materials and data generated can be used for publication and presentation in various academic forum.

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USE OF MULTIMEDIA (ANIMATED VIDEOS) FOR INFORMED CONSENT AND PATIENT EDUCATION IN NEUROSURGECY

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Purpose

The term "informed consent" explains the process by which a patient, before treatment, is provided comprehensive and impartial information regarding a planned operative procedure so that he / she understands the implications of the procedure before consenting. The goal of the current study was to investigate whether standard methods of consenting can be improved using a multimedia-based information program.

Materials and Methods

In a 6 month prospective study, 300 patients were randomized in two groups each with 150 patients. One group underwent through standard methods of consenting and another group informed consent was taken using a multimedia-based information program. Questionnaires were completed before surgery. These evaluted how patiens perceived their own understanding of important aspects of their illness. (i.e. disease, therapeutic alternatives, operation, and risks) and satisfaction with the consenting process. Patients' anxiety levels were also assessed. These questionnaires were used to evaluate the effectiveness of the multimedia-based information program for improving the consent process.

Results

70% of all respondents were satisfied with the standard informed consent process whereas all respondents were satisfied with multimedia-based informed consent. However, perceived understanding of the material was significantly improved in the multimedia-based information program group ($P<0.001$). Patients with less formal education and international patient profited particularly from the multimedia-based information program. Preoperative anxiety was relatively less in multimedia-based information program.

Conclusion

Use of the multimedia-based program was positively evaluated by patients, and significantly improved patient's perceived understanding of their disease, its treatment and making decision about treatment option.

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CHIARI MALFORMATION TYPE 1 TRIGEMINAL NEURALGIA

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Background

Trigeminal neuralgia (TN) may rarely be the presenting or only symptom of Chiari 1 malformation (CM). Two case reports have described resolution of TN following craniocervical decompression where TN is present in association with CM.

Case Report

This report discusses an two unusual case of pure Trigeminal neuralgia associated with CM that was successfully treated with Foraman Magnuml decompression and duroplasty and reviews the limited literature on the subject

Conclusion

Trigeminal neuralgia may be the sole presenting symptom of CM and can be successfully managed with craniocervical decompression. Clinicians should be aware of the association of TN with CM and consider surgical management.

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CSF FLOW STUDY IN CHARI I MALFORMATION

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Chiari malformation is a collection of hindbrain abnormalities ranging from simple herniation of cerebellar tonsils to complete agenesis of the cerebellum. Hans Chiari in early 1890s first described the condition. Cerebrospinal fluid (CSF) flow abnormalities are known to be present in Chiari I malformation and to underlie the origin and progression of associated syringomyelia.

AIMS AND OBJECTIVES

To study the CSF flow across foramen magnum in patients of Chiari I malformation. To assess the effect of surgery on CSF flow.

METHODS

We included all Symptomatic Chiari I patients who came to our hospital in the last 1 year. Clinical evaluation, Pre and post op MRI with CSF flow study was done. Foramen magnum decompression (FMD) with excision of posterior arch of C1 was done. Effect of surgery on Clinical and radiological status was analyzed.

RESULTS

We evaluated 10 patients with Chiari I malformation that underwent FMD. Patients were between 15 to 49 years with 4 men and 6 women. Neck pain was the most common presenting complaint followed by sensory symptoms and weakness of limbs. Average tonsillar herniation was 8.5 mm. patients had syringomyelia and 1 of them had syringobulbia as well. All patients had some clinical improvement at 3 months follow-up. Post-op CSF flow study showed improved CSF flow across foramen magnum in all the operated patients.

CONCLUSIONS

CSF flow study is a good adjunct for clinical assessment, to decide on the need for surgery and the type of surgery by assessing the site of CSF flow obstruction and follow-up in patients with Chiari 1 malformation.

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ROLE OF KINEMATIC MAGNETIC RESONANCE IMAGING FOR EVALUATION OF CERVICAL SPONDYLOTIC MYELORADICULOPATHY - DIAGNOSTIC ACCURACY AND SURGICAL PLANNING

Sachin Sambhaji Chemate, Department Neurosurgery, Apollo Hospitals, Chennai & Balamurugan. M., Senior Consultant, Neurosurgery, Apollo Hospitals, Chennai.

Purpose

The dynamic component of disc-associated cervical spondylotic myeloradiculopathy currently is evaluated using Static MRI, which does not assess dynamic changes in flexion and extension of the cervical vertebral column. The objective of the study is to evaluate the feasibility and utility of Kinematic MRI imaging in diagnostic accuracy and surgical planning of evaluation of cervical spondylotic myeloradiculopathy.

Methods

In Prospective study, 30 patients with cervical spondylotic Myeloradiculopathy were evaluated with conventional standard MR cervical spine and kinematic MRI cervical spine with flexion and extension. Morphologic and morphometric assessments were compared between neutral, flexion and extension images. Muhle classification was used to assess cervical canal stenosis.

Results

Age : 42 - 82 (mean 65), 25 males and 5 females.

The cervical cord length was significantly longer in flexion and significantly shorter in extension in all cervical cord sagittal lines. The cervical canal length pattern was also the same as the cervical cord. Flexion was associated with improvement or resolution of spinal cord compression in 90% patients, whereas extension caused worsening of compressions in all patients. Extension identified new compressive Lesions (Identification of new T2 hypertensities).

Conclusion

Our results suggest that Kinematic MRI is feasible and provides additional information in diagnostic accuracy and surgical planning beyond what is observed with neutral imaging, primarily when using extension and flexion views.

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IS GAMMA KNIFE RADIOSURGERY IS THE TREATMENT OF CHOICE FOR SMALL VESTIBULAR SCHWANNOMA WITH SERVICEABLE HEARING?

A.R. Prabu Raj, NIMHANS, Bangalore.

OBJECTIVE

Gamma Knife radiosurgery (GKRS) is an established treatment modality for vestibular schwannoma (VS). Tumor control and Hearing preservation rates suggest GKRS as a good alternative for small and medium VS. There is lack of literature in Indian scenario on GKRS for VS. The aim of our study was to find the hearing preservation rates, tumor control rates and factors contributing to hearing preservation after GKS.

METHODS

In a retrospective study over 10 years, 77 patients having unilateral VS with Gardner-Robertson (GR) class I or II serviceable hearing were evaluated with MRI and audiology for assessment of factors affecting tumor control and hearing preservation rates.

RESULTS

The mean age at the time of GKS was 39.6 yrs. Forty two (45.%) patients had GR class I, 35 (54.%) patients had GR class II hearing at the time of GKS. The median tumor volume was 4.7cc. The median maximum and tumor margin doses were 24 and 12 Gy respectively. The median follows up period was 30 months. The overall tumor control rate was 96.%. Hearing preservation rates were not affected by age ($p=0.82$) or tumor volume ($p=0.35$) but Pre-GKRS pure tone average (PTA) < 20 dB ($p=0.08$) and cochlear dose < 4 Gy ($p=0.41$), Pre-GKRS Ohata class C, D, E ($p=0.46$) are significant. Hearing preservation rate is 79.%

CONCLUSION

For majority of patients with small VSs, GKRS is an effective alternative treatment to microsurgery with retained serviceable hearing and good tumor control rate.

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NAVIGATION ASSISTED BRAINSTEM SURGERY- OUR INITIAL EXPERIENCE

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AIM

Brainstem lesions are surgical nightmares for neurosurgeons. It requires good surgical expertise and steep learning curve. A slight error can result in devastating postoperative morbidity and mortality. Neuronavigation has aided in entering safe surgical corridors with much more precision and less morbidity.

MATERIALS AND METHODS

Eight patients with brainstem lesions of varying etiology from hypertensive ICH, cavernoma, glioma were operated using navigation assistance. Standard telovelar approach with safe corridor through floor of fourth ventricle was used with navigation assistance.

RESULTS

Out of eight patients, 4 had hypertensive brainstem ICH, 3had cavernoma, and 1 glioma. Patients with GCS 3 to 5 or with poor respiratory effort were not taken for surgery. patients from ICH group and others had good clinical outcome. Subtotal excision was done in glioma patient.

CONCLUSION

Neuronavigation assisted brainstem surgery improved our outcome and surgical results. It definitely adds to the surgeons armamentarium for safe brainstem surgery.

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CISTERNOSUBDURAL SHUNTING - AN AIDE TO CISTERNOSTOMY IN MALIGNANT ICT

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AIM

Decompressive craniotomy for raised ICP has been in practice for long. Cisternostomy using microsurgical techniques has been a latest addition to neurosurgeons in management of raised ICP. Addition of cisternosubdural shunt helped reduce ICP further and better clinical outcome

MATERIALS AND METHOD

Two patients with frontal contusion with diffuse cerebral edema and significant bradycardia and hypertension underwent bifrontal craniotomy with cisternostomy. we also placed shunt in prepontine and interpeduncular region and attached it to dural edge. On and off CSF aspiration were done from subgaleal region which further reduced the ICP

RESULTS

Both the patients recovered well with Glasgow outcome scale of 5 in one patient and 4 in other at the end of 2 months.

CONCLUSION

Addition of shunting further reduced ICP. Option of CSF aspiration could be done which augmented treatment. Further studies with ICP monitoring is needed before the real benefit of cisternosubdural shunting can be documented.

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CEMENT AUGMENTATION PROCEDURE (VERTEBROPLASTY) - OUR INSTITUTIONAL EXPERIENCE

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A study of 30 patients with single level vertebral fractures for cement agumentation procedures (vertebroplasty) by unilateral transpedicular approach in our institution over a period of two years

(2015-2016). We compared visual analogue scoring and Roland Morris disability scoring at post operative day 10, one month and six months period.

Among 30 patients, nine patients has not come for follow up. Among 21 patients, nineteen patients have been improved in visual analogue and Roland Morris scoring system (Daily life living and pain relief). Two patients have not shown significant improvement in pain relief and planned for spinal stabilisation.

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EFFECTIVENESS OF NEURONAVIGATION IN INTRACRANIAL LESIONS; AN INSTITUTIONAL EXPERIENCE

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Neuronavigation based on preoperative imaging data is a ubiquitous tool in the surgical management of brain tumors. It is a technique that helps the neurosurgeon to tailor the surgical procedures in order to increase diagnostic yield and to preserve brain normal function while maximizing the necessary extent of resection.

MATERIALS AND METHODS

An infrared optical system and electromagnetic system with integrated microscope guidance were used for frameless intracranial neuronavigation. Preop MRI /CT brain were taken in all patients in navigation protocol and installed respectively and used in navigation system.

CONCLUSION

Purpose of this study is to show the usefulness and effectiveness of neuronavigation in day to day practice of neurosurgery.

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RETROSPECTIVE STUDY ON THORACOABDOMINAL APPROACH – AN INSTITUTIONAL EXPERIENCE

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While several approaches have been suggested for performing a transthoracolumbar corpectomy of the thoracolumbar spine, the steep learning curve and high risk of operative morbidity often dissuades its use clinically. As a result, posterior approaches have been more frequently used, though transthoracolumbar approaches often allow for improved access for more complete decompression of the spinal cord.

Additionally, the transthoracic approach allows for more complete removal of vertebral body lesions along with better access for anterior vertebral reconstruction. Here we are presenting 30 cases which were approached through anterior thoracoabdminal route for various etiology from 2014-2018 in our institute.

We analyse the symptomatology, various factor associated pre, intra and post operatively, surgical techniques, morbidity, advantage of doing anterior approach alone in non mobile segment and post op follow up.

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THORACIC DUMBBELL TUMORS

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Introduction

Thoracic dumbbell tumors are relatively rare and usually arising from neurogenic elements. The majority of nerve sheath tumors are entirely intradural, But 30% extend through the dural root sleeve, which Results in a "dumbbell"-shaped tumor with Both intradural and extradural components. Method for surgical removal of the tumour remains controversial.

We are presenting two such rare cases of giant dumbbell tumors with both Intraspinal and intra thoracic extension with similar presentation

Materials and Results

Two young females presented with girdle pain in upper thoracic region and Progressive spastic Paraparesis involving distal > proximal and diminishes sensation below costal margin for loss of all modalities. Radiologically Diagnosed as Giant dumbbell tumour with Intra spinal & Intra thoracic extensions. Both Patient underwent single staged Right Lateral thoracic approach, excision of tumour and Decompression of spinal cord. Postoperative period were uneventful.

Conclusion

Single stage approach through lateral thoracic incision is feasible, safe and efficient for complete excision of thoracic dumbbell tumors. This approach needs minimal muscle dissection and less blood loss and operative time and postoperative pain, thus enabling early mobilization with reduced hospital stay.

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EXTRADURAL SPINAL ARACHNOID CYST

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Introduction

Spinal arachnoid cyst is a rare cause of myelopathy secondary to spinal cord compression. These cysts most commonly occurs in the middle to lower thoracic spine (65%), but also have been reported in the lumbar and the lumbosacral (13%), thoracolumbar (12%), sacral (7%) and cervical (3%) regions. MRI of the spine revealed long segmental cystic lesions of CSF intensity in the extramedullary extradural plane suggesting arachnoid cyst with cord compression. Intraoperatively a dural defect was identified in all cases and microsurgical repair of dural defect was done and verified for CSF leak. The neurological status of the patients improved postoperatively in the previous reports.

We are presenting two cases of thoracolumbar spinal arachnoid cyst with their Clinico-radiological features and surgical outcome.

Materials and Methods

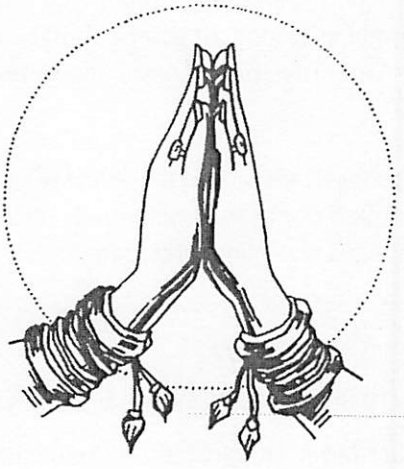
Two teenage females, presented with insidious onset, non traumatic, spastic paraparesis. Radiological imaging showed long segment extradural arachnoid cyst in thoracolumbar region. Microsurgical excision and repair of dural defect was done. Patients were followed up for one year.

Results

Both the patients had resolution of symptoms. There was no death or significant morbidity. They did not require further surgical procedures. There was no recurrence.

Conclusion

Extradural spinal arachnoid cyst has to be considered as a rare cause in the differential diagnosis of insidious onset, non traumatic compressive myelopathy. Neurological recovery depends on the size of the cyst, degree of cord compression and the duration of symptoms. Surgery may be offered as curative or prophylactic treatment. Microsurgical repair of dural defect is important in preventing the recurrence.



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