EP-0922 [Neurotraumatology and Neuro Critical Care » Others]

Occipital Calcified Chronic Epidural Hematoma

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Chronic calcified/ossified epidural hematomas (EDH) are rare complications of head trauma or cranial procedures. The more underwent head computed tomography after minor injuries,the identification of epidural hematomas has been risen.The exact incidence of epidural hematoma ossification is unknown. It has been hypothesized that damage to vascularized tissues such as bone and dura provokes inflammation,repair and remodelling in tissues.Careful follow-up seems to be mandatory when EDHs are treated conservatively. A 32 year-old woman was admitted to our outpatient department with the complaints of severe headache. She had a head trauma 1 year ago. She had no neurological deficit. She had no metabolic,endocrinological,or systemic disease. All routine hematological investigations and coagulation profile were normal. Calvarial X-ray showed no fracture line but inner tabula calcified line. CT scan of brain revealed left side suboccipital hypodense area with calcified inner layer of 4-5 mm thickness. MRI scans showed suboccipital hypodense and non-contrast enhancement area. After the diagnosis, both advantages and disadvantages of surgical and non-surgical treatment options were told to the patient. Regarding the patient's informed consent on conservative treatment and the patient's good clinical condition, the patient was decided to be followed-up clinically, radiologically with successive CT scans and MRI. Head injuries are major public health problem worldwide. Since the introductıon of CT scan, incidence of surgical and non-surgıcal EDH among patients reported to be in range of 2.7-4% with mortality around 5% in children and 7-12.5% in comparable adults. Osseous transformation is still not well understood.

Keywords: Calcification, Epidural hematoma, Ossification

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Assessing Efficacy of NeuroAiD in Improving Functional Outcome in Intracranial Hemorrhage and Traumatic Brain Injury

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Background: NeuroAiD, a combination of natural products, is used to improve recovery after ischemic stroke. Its neurorestorative properties in preclinical model of traumatic brain injury (TBI) makes it attractive for treatment of brain injuries. We aimed to evaluate the safety and potential efficacy of NeuroAiD in brain injuries.
Method: The NeuroAiD Safe Treatment (NeST) Registry (clinicaltrials.gov NCT02536079) is a registry that provides information on use and safety of NeuroAiD in clinical practice. We analyzed anonymized information of TBI and intracerebral hemorrhage (ICH) patients in the NeST Registry (www.neuroaid.com/en/nest/main/index). Patients consented are prospectively entered using online forms for baseline and follow-ups. Data collected include demographics, diagnosis, medical history, modified Rankin Score (mRS), Glasgow Coma Scale (GCS), National Institute of Health Stroke Scale (NIHSS), compliance and side effects.
Results: Sixty-one patients from Malaysia were included in the NeST registry, 43 with ICH (mean age 57.53±13.36 years; female 16) and 18 with TBI (mean age 44.2± 17.1 years, female 5). Median GCS for TBI patients was 11 (range 3-15) at baseline, 13 (6-15) at visit-2 (V2), 15 (10-15) at V3 and 15 (6-15) at V4. Median NIHSS for ICH patients was 10 (0-33) at baseline, 8 (0-26) at V2, 11 (0-41) at V3 and 8.5(0-31) at V4. mRS improved over time for both TBI and ICH patients. One patient with Sjogren's reported side effect (skin rash/lip ulcer) at day 35 of NeuroAiD intake.
Conclusion: NeuroAiD was safe in TBI and ICH patients with improved overall functional, neurological and cognitive measures.

Keywords: Brain injuries, Safety, Efficacy, NeuroAiD

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Difficult Cases in Surgery of Gunshot Wounds to the Skull and Brain - A Single Center Experience

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Aim: To analyze the results of treatment of patients with difficult combat traumatic brain injuries caused by a gunshot (gTBI), to develop practical recommendations for their treatment on the basis of personal experience and analysis of literature sources.
Method: The results of treatment of 2,120 wounded May 2014 to January 2017 have been analyzed. Combat gTBIs were diagnosed in 160 patients. The following groups have been referred to severe gTBIs: A. By the kind of the wounding shell: bullet, multiple fragmentation mine and explosive brain injuries, B. By the nature of the wound canal: diametrical, diagonal. C. By the location of the wound canal: bilateral, transventricular, transbasal, penetrating wounds with the injury of paranasal sinuses. D. By the presence of severe structural injuries of the brain substance: injuries of subcortical ganglia, brain stem, and cerebellum, extended loci of brain contusion and crushing, multiple loci of brain contusion and crushing. E. By the presence of injuries of functionally important brain vessels: main arteries (trunks and their major branches). venous sinuses.
Results: Difficult severe injuries were diagnosed in 74 (46.25%) patients out of 160 cases of combat gTBIs. 18 patients out of 160 patients with gTBIs died. Mortality comprised 11.25%. The mortality rate for severe combat gTBIs is 24.3%.
Conclusion: Detection at the stage of diagnosing of severe combat gTBIs takes surgical tactics and intensive therapy into the right direction in accordance with developed practical recommendations.

Keywords: Combat traumatic brain injures, Gunshot wounds, Difficult cases, Surgery, Single center experience, Practical recommendations

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A Rare Complication of Arachnoid Cyst

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Arachnoid cysts are congenital lesions and they are benign and non-neoplastic. The symptoms associated of arachnoid cysts of the central nervous system depend cyst size and growth rate, location. In literature, some cases associated with cerebrospinal fluid dynamic disorders are reported. Generally, arachnoid cysts are asymptomatic and they are not be presented with intracranial haemorrhage or hygroma. Intracranial haemorrhage/hygroma are rarely seen, but after various head traumas may cause to these conditions. We present two cases with subdural hygroma which observed after arachnoid cyst rupture. The first case is 31 year-old male. In anamnesis, he had a head trauma 5 months ago and has persistent headache and diziness. The second case is 49 year-old male and he has similar symtoms and also had headache. They are fully conscious oriented. Physical examination and the lab results were normal. Computerized tomography showed the intracranial temporal arachnoid cyst and the subdural hygroma. The follow up time of the first patient is 3 years and 1 months for second. The first patient was operated for drainaging the subdural hygroma with a burr-hole, but after 9 months the patient admitted and enlarged cyst and relapsed hygroma are detected. After these findings subdural-peritoneal shunt was placed. The second was operated only with subdural-peritoneal shunt with no hygroma drainage. They are in a good condition. We present this cases for explain a reason: a benign formation of arachnoid layer can be transform to a life-threatening condition. We have to be careful about head trauma in this cases.
Keywords: Rupture cyst, Hygroma, Headache, Post-trauma

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Neurological Surgery Admissions to the Intensive Care Unit of a Tertiary Health Institution in South-East Nigeria: An 8-Year Review of Patterns and Outcome

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Aim: To evaluate the clinico-demographic patterns, and assess the factors determining outcome of neurological surgery admissions to the intensive care unit (ICU) of a tertiary health institution in South -East, Nigeria.
Method: A retrospective study of all neurological surgery patients admitted into the general ICU of a tertiary health institution over 8 years that ended, March 2016. Relevant data from ICU admission-discharge registers and patients' case notes were collected on proformas. Analysis was done using the Statistical Package for Social Sciences (SPSS Inc., Chicago, IL, USA) version 20.0.
Results: Neurosurgery ICU admissions were 539, males 405(75.1%), and 134 (24.9%) females. Aged ranged from 2 months to 80 years (mean 36.65 ± 19.41 years). 26.6% of the admissions in their first 3-decade of life. 75.7% were admitted for traumatic brain injury (TBI), mostly resulting from motorcycle and motor vehicular accidents. Other indications were post-operative patient monitoring (10.52%) and high cervical spinal cord injury (4.78%) and others. 141 patients (26.1%) had a neurosurgical intervention either prior to or during the ICU admission. Admission into the ICU was delayed in about 20%. The lengths of admissions ranged from ≤24 hours to 151 days (median 4 days, mode: ≤24 hours). 56.2% of admitted patients achieved significant recovery and were discharged. Less than 7 days admission had higher mortality and this was statistically significant.
Conclusion: Severe TBI was the most common indication for ICU admission. Length of ICU stay influences outcome. More ICU facilities and personnel are needed to further improve outcomes.
Keywords: Severe TBI, Neuro-critical care, Trauma, Monitoring

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Differential Diagnosis of Severe Alcohol Intoxication, Traumatic Brain Enabling Damage

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Alcohol affecting the nervous system, can cause significant changes in cerebral and focal neurological picture, and therefore have difficulty differentiating signs of intoxication and traumatic brain injury.Studying the dynamics of neurological symptoms, depending on the blood alcohol concentration shows that even with a mild degree of intoxication (blood alcohol concentration of about 0.5-1.5% arises emotional liability, impaired coordination of movements of criticism and orientation. With moderate intoxication (blood alcohol concentration of 1.5 to 2.5% of the 32.6-54.3 mmol/l) occur more profound changes in the mental state of the patient: drunk very lively decouples or conversely sleepy completely indifferent to the state of euphoria reaches its highest expression: a person becomes complacent, cheeky, cheerful often there are changes in the nature of the criticism of his behavior drastically reduced, exposed instincts, reactions to external stimuli often acquire affective form, in an insignificant occasion may be the rage, joy and others. Here ataxic disorders defined as a change in handwriting, incoherent, poorly articulated speech, etc. Pain and tendon reflexes weakened abdominal reflexes, as a rule, are not called.
In this way, in patients with alcohol intoxication, even small closed craniocerebral trauma can lead to extensive destructive changes in the brain, its blood vessels and membranes that is caused by changes in the vessel walls, and increased tendency to edema-swelling of the brain. The postoperative period in these patients is much harder for. Such patients require intensive treatment aimed primarily at improving brain blood circulation and reduce edema, swelling of the brain.
Keywords: Alcohol, Barin injury, Brain svelling