



Scientific Tracks & Abstracts  
Day 1



## Strain differences in sympathetic neurotransmission in spleens of rats subjected to reduced sympathetic tone

**Samuel Perez**

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Senescence of innate and adaptive responses and low-grade inflammation (inflammaging) hallmarks normal aging, which increases vulnerability to infectious diseases, autoimmunity and cancer. In normal aging, sympathetic dysregulation contributes to the dysregulation of innate and adaptive immunity and inflammaging. Sympathetic innervation of immune cells in secondary immune organs regulates immune responses. Different profiles of sympathetic signaling during aging may bring about different effects on neurotransmission in immune cells that may lead to immunity variation in senescence. We investigated whether increased sympathetic nerve activity (SNA) in the aging spleen contributes to age-related sympathetic neuropathy and altered neurotransmission in splenic lymphocytes of two strain of rats of strikingly different sympathetic activation and behavior profiles. To answer this question, we injected 15 month-old rats, of either strain, 0, 0.5 or 1.5  $\mu\text{g}/\text{kg}/\text{day}$  rilmenidine intraperitoneally, for 90 days to lower sympathetic tone. Untreated young and age-matched rats controlled for effects of age. We found that in Fischer 344 (F344) rats, an age-related increase in sympathetic tone and sympathetic dysfunction in beta-adrenergic receptor (AR) signaling of splenic lymphocytes contribute to immune senescence. In the much longer-lived Brown-Norway (BN) rats, we observed that elevated SNA in the aging BN rat spleen does not contribute significantly to sympathetic neuropathy or the aging-induced impairment of canonical  $\beta$ -AR signal transduction. Despite the rilmenidine-induced increase in  $\beta$ -AR (Adrenergic Receptor) expression, splenocyte c-AMP (Cyclic adenosine monophosphate) production was comparable with age-matched controls, thus dampening nerve activity had no effect on receptor coupling to adenylate cyclase. Understanding how aging differentially affects neuroimmune regulation in healthy aging rodent of different strain models can help us formulate strategies to improve health in aging populations that are most vulnerable to immunosenescence and low-grade systemic inflammation.

### Biography

Samuel Perez is currently working as an assistant professor in Washington Adventist University, Maryland. He achieved his PH.D in the area of Neurophysiology/Neuroimmunology at Loma Linda University School of Medicine, California. Sam D Perez obtained the degree of master's in Molecular Physiology at Loma Linda University. His scientific research interest includes: Study the effects of neuroprotective micronutrients on learning and memory function in animal models using molecular biology tools and animal models to understand neuroimmune mechanisms of cell protection and many more.

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## **Correlation of ubiquitin c terminal hydrolase and s100 $\beta$ in predicting deficits in cognitive control in young adults with mild traumatic brain injury**

**Subir dey**

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**Objective:** To study the acute phase serum biomarkers in patients with mild traumatic brain injury (mTBI) and to correlate them with short term cognitive deficits.

**Materials and Methods:** This is a prospective observational study conducted at a tertiary care center for neurotrauma. The participants included patients with mTBI (n = 20) and age, gender, and education-status matched healthy controls (n = 20). In both the groups, the serum concentrations of biomarkers ubiquitin C terminal hydrolase (UCH-L1) and S100 calcium-binding protein B (S100B) were measured. Both the groups underwent neuropsychological tests. The serum tests were done in the acute stage after injury and the neuropsychological tests were done 3 months after injury.

**Results:** There was no significant increase in the serum S100B and UCH-L1 levels in patients with mTBI. Patients with mTBI had significant cognitive deficits at 3 months after injury, which was suggestive of involvement of diffuse areas of the brain, in particular, the premotor, prefrontal, and medial inferior frontal lobes and the basitemporal region. The correlation of biomarkers with cognitive deficits in patients with mTBI was found in the following domains: working memory, verbal learning, verbal fluency, and visual memory.

**Conclusion:** The serum biomarkers of mTBI have a correlation with selective domains of neuropsychological outcome.

### **Biography**

Subir Dey is heading the department of neurosurgery at Command Hospital Lucknow, India. He has done his graduation and post-graduation from Armed Forces Medical College. Later he did his Mch from NIMHANS, Bangalore. He has a keen interest in the Neurotrauma and Rehabilitation of Indian soldiers their relatives and veterans. It gives him immense pleasure to see and treat or operate the head injury individuals who come in comatose condition and go on their foot walking. He is instrumental in designing the neurorehabilitation programme at our centre.

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### **Notes:**

## **Outcome of external ventricular drainage in spontaneous intracerebral hemorrhage with ventricular extension in different GCS score**

**Mahamudul Haque Morshed**

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**Background:** Intracerebral Haemorrhage (ICH) is a medical emergency of the highest degree with frequent early neurological deterioration or death. External ventricular drainage (EVD) is the procedure of choice for the treatment of spontaneous intracerebral haemorrhage with ventricular extension or blood within the ventricles, acute hydrocephalus and increased intracranial pressure in patients of intracerebral haemorrhage and subarachnoid haemorrhage (SAH) with hydrocephalus and its sequelae.

**Objective:** The aim and objective of this study was to predict the outcome of pre operative GCS (Glasgow Coma Scale) following external ventricular drainage in spontaneous intracerebral haemorrhage with ventricular extension.

**Method:** In this was prospective observational studies, a total number of 60 cases were taken purposively for a period of July 2015-March 2017 diagnosed by CT scan of brain at Department of Neurosurgery, Dhaka Medical College Hospital. All the patients, fulfilling the inclusion and exclusion criteria, were enrolled for the study. For assessing outcome of EVD in post operative patients and evaluating the efficacy of EVD surgery in follow ups. Glasgow Coma Scale (GCS) and Glasgow Outcome Scale (GOS) scoring method for patient assessment were used for outcome of EVD surgery.

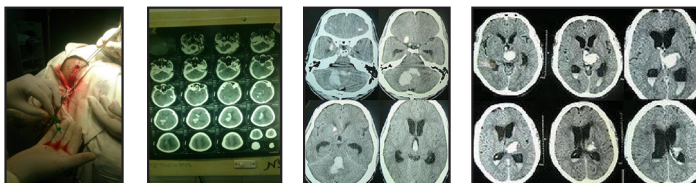
**Result:** A total of 60 patients were included in this study, age range was 45 to 86 years. Majority patients, 24 (40.0%) were from 61-70 years of age. The mean age was found 62.0±20. It was observed that 24 (40.00%) patients had GCS 5. GCS 6 was observed in 14(23.33%) patients. GCS 5 and 6 were not found post operatively in any cases. GCS 7 was observed in 14 (23.33%) cases. Whereas, GCS 8, 9, 10 were found in 11 (18.33%), 13 (21.66%), 10(16.66%) cases respectively and 4 cases were died on first post operative day. In most cases GCS level raised to 2 points. GOS at 7th POD died total 12 (20.00%) cases. It was observed that 48 (80.00%) patients were alive.Moderate disability existed in 12(25.00%) cases. Again, severe disability and persistent vegetative cases observed in 14(29.16%), 9(18.75%) cases. Glasgow Outcome Scale at 3 months follow up of my study patients, it was observed that total died patients 16 (26.66%).

**Conclusion:** According to my study, majority of the study patients survived following EVD in spontaneous ICH with ventricular extension, but most cases was unfavourable outcome which was statistically not significant (as p value > 0.05) and GCS score raised 2 in majority cases in the study subjects.

### **Biography**

Md Mahamudul Haque Morshed, completed MBBS very good from Sher-e-Bangla Medical College, Bangladesh in 2002. After passed MBBS joined Bangladesh Civil Service (BCS Health), worked various hospitals, and give services to poor people's of Bangladesh. He was very much interested in Neurosurgical field from very beginning, and completed MS (Neurosurgery) in 2018, from DHAKA MEDICAL COLLEGE HOSPITAL, under DHAKA UNIVERSITY, BANGLADESH. He attend conference and workshop of neurosurgery in various countries in the world. He is now working as a neurosurgeon in Dhaka Medical College hospital and honorary consultant Neurosurgeon in Delta Medical College Hospital, Bangladesh.

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Spontaneous ICH on axial CT scan and EVD surgery

Neurosurgery and Neurological Surgeons

&

9<sup>th</sup> Global Summit on

Neuroscience and Neuroimmunology

May 22-23, 2019 London, UK

Young Research Forum



## Frequency and outcomes of unplanned reoperation in neurosurgery

**Noor Malik**

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**Introduction:** Morbidity and mortality rates are used to evaluate the quality of care delivered by surgical services. However, recently unplanned reoperation rate has been proposed as a quality indicator in surgery. Although, little is known about complications and outcomes of unplanned reoperations in Neurosurgery and it has not been studied extensively. It does not only increase the financial cost of treatment but also bring dissatisfaction to patients and families.

**Material and Methods:** This retrospective cohort study was conducted at the Aga Khan University Hospital, Section of Neurosurgery. All patients, from January 2010 to December 2017, who underwent unplanned reoperation within 30 days after craniotomy were included in the study. Patients with missing data and patients who underwent first surgery outside Aga Khan University Hospital were excluded from the study. Data was collected on a structured proforma. Medical records and Patient Care Inquiry were used for data collection. Data was analysed using SPSS (Statistical Package for the Social Sciences) IBM version 22. Continuous variables with normal and non-normal distributions were represented as mean and median. Categorical data was represented as percentage and proportions. Chi square test was used to compare the categorical data.

**Results:** The incidence of early unplanned reoperation was 3.5% (occurring after 175 of 4925 procedures). Median age of patient was 36 (IQR 33) years. Majority of patients were male (3:1). Hypertension was seen in more than half of patients with hemorrhage ( $p=0.014$ ). 80% patients with thrombocytopenia had hemorrhage after first surgery. More than half of the patients who underwent early unplanned reoperation initially had surgery for tumor resection (48.2%) and hemorrhage (16.8%). Hemorrhage (40%) was the most common indication for early unplanned reoperation, followed by hydrocephalus and cerebral edema. EDH being most common (10.2%), followed by postoperative elevated intracranial pressure (19%) and cerebral edema (18%). The average time interval ( $\pm$  SD) between first surgery and reoperation was  $7.4 \pm 8.5$  days. The average length of stay following reoperation was 12 (IQR 15) days. Mortality rate was 15% and majority of deaths occurred when reoperation was done within first week of index surgery.

**Conclusions:** Reoperation rate can be implemented as an important function of quality indicator. It has higher mortality as compared to first surgery but long-term outcomes are comparable

### Biography

Noor Malik has completed MBBS with honors in September 2004 from Pakistan. She did her internship from Aga Khan University Hospital in 2005. After internship, worked as a resident medical officer in private medical Centre from 2006 to 2010. She has been certified by Education Commission for foreign medical graduates, USA. Has started neurosurgical residency program in 2014, from Aga Khan University Hospital. Currently she is in her last year of training.

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### Notes:



Scientific Tracks & Abstracts  
Day 2



## Case report on a very rare benign giant osteoma in temporo-parieto-occipital region

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Osteoma is a slow growing benign mesenchymal osteoblastic tumor formed by mature bone tissue. The most common site reported is the fronto-ethmoidal region and neighboring sinuses. Involvement of the temporal and occipital squama is extremely rare. Like giant osteomas in other locations of the skull, they can reach large volumes but are essentially benign and potentially curable by excision. The author presents a case of giant osteoma in Temporo-Parieto-Occipital region in a teenage girl.

### Biography

Md Mahamudul Haque Morshed, completed MBBS very good from Sher-e-Bangla Medical College, Bangladesh in 2002. After passed MBBS joined Bangladesh Civil Service (BCS Health), worked various hospitals, and give services to poor people's of Bangladesh. He was very much interested in Neurosurgical field from very beginning, and completed MS (Neurosurgery) in 2018, from DHAKA MEDICAL COLLEGE HOSPITAL, under DHAKA UNIVERSITY, BANGLADESH. He attend conference and workshop of neurosurgery in various countries in the world. He is now working as a neurosurgeon in Dhaka Medical College hospital and honorary consultant Neurosurgeon in Delta Medical College Hospital, Bangladesh.

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## Neuroendoscopic management of cystic craniopharyngioma

**Ankur Bajaj**

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**Introduction:** Craniopharyngiomas are benign non-glial suprasellar-sellar tumors responsible for approximately 10% of all pediatric intracranial tumors. In spite of being benign tumors, the anatomical location, extent, tendency to invade surrounding structures, associated endocrinopathies and the difficulty in management associated with the tumor along with the subsequent morbidity and mortality make treating this tumor a challenge. The optimal management of craniopharyngiomas also remains controversial. Gross total resection (GTR) is considered the gold standard but associated with high complication rate.

**Objectives:** To study the long-term outcome of Neuro-endoscopic management of cystic craniopharyngiomas.

**Material and methods:** This was a single center retrospective study. Retrospective data was collected from departmental record section and hospital follow up visit records from January 1, 2010 to December 31, 2017 from Department of Neurosurgery, KGMU, Lucknow. Their epidemiological and clinico-radiological parameters were tabulated and the outcome was analyzed on the basis of treatment modality, morbidity & mortality.

**Results and conclusions:** Craniopharyngiomas most commonly occurred in the first decade. The male to female ratio was 2:1. The most common clinical presentation was headache (95%) followed by impairment of vision (73.8%). On neuroimaging, most of the tumors were solid-cystic (76.6%) and 70.8% of tumors were of 3-6 cm in size. Tumor calcification was seen in 70.8% of cases and hydrocephalus was seen in 83.3% of cases. Hypothyroidism (58.3%) was the most common endocrinal impairment. Mean follow up of the patient is 43.35 months. In the current study it is observed that Five-year survival rate was 82.70% with Functional independency was seen in 17 (70.83%) cases and Visual improvement was seen in 12 cases (50%). Most common perioperative complication was transient Diabetes Insipidus. Most common long-term complication was growth failure (41.6%). Hence Neuroendoscopic decompression is an effective alternative for long term disease control and clinical improvement without additional endocrinopathies.

### Biography

Ankur Bajaj done his bachelor's degree of MBBS from King George's Medical University Lucknow from 2002-2009. Then completed residence in general surgery from 2009-2012 and in neurosurgery from 2012-2015 from prestigious Post Graduate institute of medical science (PGIMER) Chandigarh. After completing he is full time devoted to neurosurgery and is now Associate professor in King George's Medical University (KGMU), Lucknow. He has ability to take quick and appropriate decisions in critical surgical circumstances is his strength. With Strong organizational and planning skills, he is also the co- incharge of trauma center neurosurgery department in KGMU. He is skilled in operating endoscopic and microneurosurgical procedure of brain and spine.

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## Cerebral vasculitis in henoch-schonlein purpura: A case report

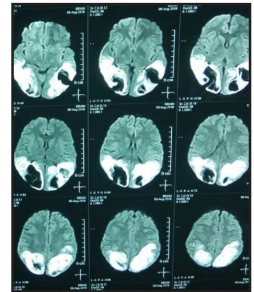
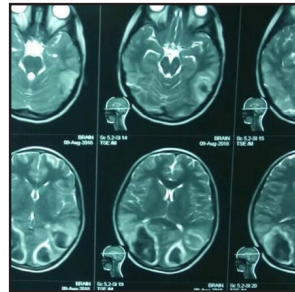
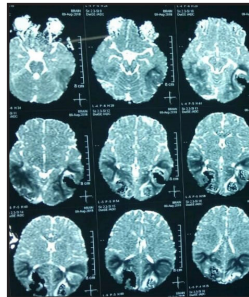
Saiful Hoque, Titas Roy, Mahmudul Haque Morshed, Uzzal Kumar Shadhu Khan, Hafiz Asif Raihan and Asit Chandra Sarker  
University of Namur, Belgium

**H**enoch-Schonlein purpura is a common form of systemic small vessel vasculitis in childhood. Although headache and behavioral changes have been described in a significant proportion of children with Henoch-Schonlein purpura, severe neurological complications are rare. In this article, we report a case of central vasculitis in an eleven-year-old girl who presented with headache, convulsion and impairment of vision. The treatment options for cerebral vasculitis of Henoch-Schonlein purpura are numerous but controversial in pediatric patients. Our patient was successfully treated by pulse methylprednisolone. The patient was followed-up for six months without any sequel.

### Biography

Saiful Hoque, is currently working in Dhaka medical college, Bangladesh as a Neurosurgeon. He has been actively managing neurosurgical patients with immense care. He has a wide area of interest in Neurotraumatic brain disorders.

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### Notes: