

EVENT REPORT

INAUGURATION OF 1ST BRAIN ATTACK CENTRE OF NEPAL

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Stroke is a leading cause of mortality and morbidity worldwide, stroke is broadly classified into ischemic and hemorrhagic types. Majority being the ischemic type. Contrary to the belief ischemic stroke is curable, if the patient can reach a brain attack center (stroke center) in 4.5 hrs. **There is a lack of stroke literacy in Nepal, stroke centers and above all neurologists!!!**

We conducted a stroke awareness campaign in Eastern Nepal for 3 months and visited Belbari, Uurlabari, Damak, Inarwa, Rajbiraj and Biratnagar. The program entailed training physicians and health assistants about stroke awareness and acute stroke treatment. We observed that stroke awareness is low at all levels, including physicians. So, with the motto that 'STROKE IS CURABLE', NeuroCardio & Multispecialty Hospital (NMCH, Biratnagar) decided to start a brain attack center. Which in fact is the first brain attack center of Nepal, under the leadership of Dr. Samarth Singh (interventional neurologist) and Dr. Birendra Kumar Bist (neurologist). Inauguration of the brain attack center was held at hotel Asia Tiq, Biratnagar on Bhadra 8th 2075. The program was organized in two sessions. The first session was CME on brain attack by international and national neurologists, interventional neurologist, neurosurgeon and endovascular neurosurgeon. In the second session we organized the inauguration of the brain attack center by honorable minister for internal security and law, Shri Hikmat Kumar Karki and honorable social development minister Shree Jivan Ghimire, of Federal province no 1 of Nepal.

CME ON BRAIN ATTACK

The CME on brain attack was moderated by Dr. Y.B. Roka (senior consultant neurosurgeon, NMCH) and Dr. Birendra Bist (Chairman, NMCH). The first speaker was Dr. Pankaj Jalan (MD, DABPN, Consultant Neurologist, Norvic International Hospital, Kathmandu) and he presented 'diagnosis of acute stroke'. Special emphasis was laid over timely diagnosis of stroke as stroke is curable within 4.5 hours of onset. He also displayed the acronym 'FAST' for easy recognition of stroke at all levels of making diagnosis. **F**-Facial Asymmetry, **A**- Arm and leg weakness, **S**- speech problems all the three findings alone or in combination should trigger 'T'. **T**- Time to call/transfer patient to stroke center. Diagnostics based on CT and MRI were also discussed. The former being the instant investigation to differentiate hemorrhagic stroke from ischemic stroke. The second presentation was done by Dr. Raju Paudel (MD, DM, Consultant Neurologist, Grande International Hospital, Kathmandu) on IV thrombolysis. He beautifully laid emphasis on the available time window for IV thrombolysis (4.5) hours from

onset. And also explained possibilities of IV thrombolysis beyond 4.5 hrs based on advanced MRI modalities such as diffusion perfusion mismatch studies, which can identify cases that can benefit from IV thrombolysis even after 4.5hrs.

The third presentation was on digital subtraction angiography (DSA); cerebral angiogram by Dr. Girish Rajpal (HOD neurointervention Max Vaishali & Max Padpadgaunj, India). His instrumental presentation was on cerebral DSA, which forms the basis of all the endovascular management in stroke and neurointervention. He covered history of neurointervention, DSA procedure technique, findings in acute stroke, hemorrhage, brain tumors, arteriovenous malformations and other brain and spinal diseases. A short piece of information was also presented on endovascular treatment modalities such as aneurysm coiling, endovascular embolization and carotid stenting. Following an introduction to neurointervention after the presentation on Cerebral DSA, next presentation was done on mechanical thrombectomy by Dr. Samarth

Singh (MD, FINS, MBA, HOD interventional neurology NCMH), who is also the director of brain attack program. Moving beyond IV thrombolysis, which is often an adjunct to mechanical thrombectomy. Dr. Singh nicely presented neurointerventional options for recanalization of an artery by various means of mechanical thrombectomy which ranges from manual suction to stent retrieval. He also highlighted the findings of DEFUSE3 and DAWN trials which suggest that mechanical recanalization can be offered beyond 6 hrs from onset up to 24 hrs with benefits. However, it can be offered only with findings in diffusion perfusion studies. Mechanical thrombectomy is a good option from vessel recanalization. However despite findings from DEFUSE 3 and DAWN the patient selection criteria is mandatory for successful recanalization not just futile recanalization. Scoring systems such as THRIVE can be employed for patient selection and to screen out patients who are most likely to end up with complications or futile recanalization. Understanding of collaterals as shown by DSA is mandatory to the success of recanalization and to prevent complication. Good cerebral collaterals are evidently associated to low reperfusion injury, rare infarct evolution and low complication rates. He also suggested collateral based decision making for stroke recanalization not just DAWN and DEFUSE3 criteria as the former being more pragmatic in understanding, by direct visualization of angiographic conduits serving the infarct tissue. The last presentation of the CME on brain attack was done by Prof. Basant Pant (Chairman, Annapurna institute of neurological and allied sciences, Kathmandu), one of the pioneers of neurosurgery in Nepal. Stroke management is not only conservative management, IV thrombolysis and mechanical thrombectomy, as it also requires surgical interventions. Surgical options such as hemicraniectomy and EVD placement and other neurosurgical procedures for ischemic stroke management were discussed.

INAUGURATION OF BRAIN ATTACK CENTER

Dr. Birendra Kumar Bist initiated the inauguration of brain attack center with his opening remarks. He shared his two decades of experience in providing neurology services in Eastern Nepal. Under his leadership NMCH established first neurology hospital, first private neurosurgical service and first cardiac cath lab services in Eastern Nepal. And now the first brain attack center of Nepal. He stated that NMCH fulfills all the stipulated criteria of being a brain attack center in which a neurointervention compatible DSA lab (not a cardiac cath lab), neurocritical care unit (dedicated neurology ICU) and most importantly an interventional neurologist are mandatory. He also

informed the audience and media that Dr. Samarth Singh is the first registered neurointerventionist of Nepal, coincidentally son of first hematologist of Nepal, Dr. Ranjan Prasad Singh who is credited with establishing blood transfusion services (blood bank) all over Nepal in the decades of 80s and 90s.

Following the opening remarks Dr. Samarth Singh gave speech on brain attack center and stroke awareness. He explained that we should not address stroke with different confusing diagnosis and laymen terms, and requested people and health professionals to address it as brain attack, not stroke. As the word brain attack, just like heart attack injects urgency and gravity of the nature of illness at all levels to act fast and reach hospital. He also highlighted the need of more neurologists in Nepal and recommended strengthening of Nepalese neurology programs to equivalent international standards, tailored according to Nepalese needs. He drew attention of government authorities that 'this is an initiative by private institution which is insufficient to meet the stroke burden. Serious government attention and provisions are warranted to prevent and treat stroke in Nepal'.

Following his speech, honorable minister for internal security and law, Shri Hikmat Kumar Karki and honorable social development minister Shree Jivan Ghimire lighted the lamp and inaugurated the 1st brain attack center of Nepal. After inauguration honorable social development minister Shree Jivan Ghimire gave a speech which highlighted understanding of current health scenarios in Nepal. He shared his delight on inauguration of a brain attack center in province 1, and also preached the need and relevance of ethical practice by private institutions. Next speech was given by honorable minister for internal security and law, Shri Hikmat Kumar Karki, who congratulated NMCH and its team on establishing the brain attack center and enlightened the need of such initiatives for province 1. Finally, Dr. Y.B Roka acknowledged his heartiest gratefulness to the dignified ministers, guest physician speakers, media and at the audience for their participation. Then he drew the attention of the ministers on the current scenario of neurointervention in Nepal. He stated that the prices of materials for neurointervention in Nepal is very high and to make it happen in Nepal, Nepal government has to provide subsidy for provision of materials and has to take a lead in establishing neurointervention in Nepal. With his closing remarks we concluded the inauguration of first brain attack center of Nepal. It was attended by about 120 doctors, 100 nurses and health workers and 150 residents of Biratnagar and Eastern Nepal.