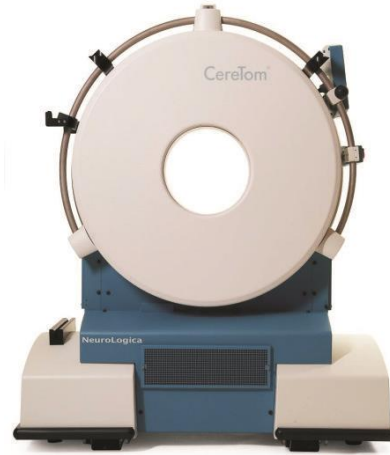


The Mobile Stroke Unit

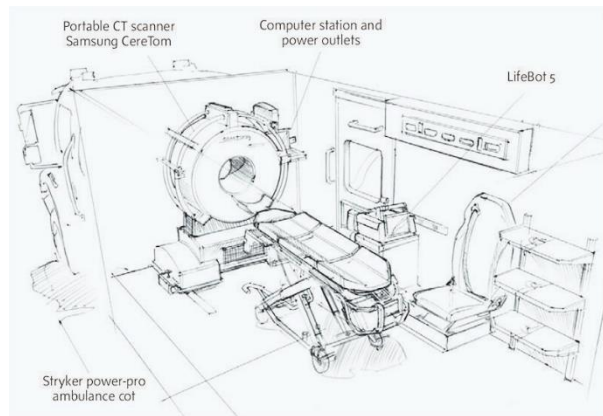


Approximately 87% of strokes are ischemic and could be treatable with TPA if administered within 3 hours. Reducing the time to treatment is critical to the health of a stroke patient. On-site diagnosis can reduce time to tPA treatment or transport the patient to a comprehensive stroke centre by up to 33%.

Stroke is a major cause of mortality & morbidity in India as per 'India: Health of the Nation's State Report 2017'. With an incidence rate of 119 to 152/100000, stroke has a case fatality rate of 19 to 42% in the country.

The lack of awareness of stroke symptoms and the delayed arrival of the patient is one of the main hurdles in stroke care. This often happens at smaller peripheral hospitals that do not have specialists or even the necessary equipment to scan the patients which leads to a delay in effective treatment.

Schiller India with Neurologica developed India's first mobile stroke ambulance equipped with a CereTom® CT scanner. The Mobile Stroke Unit MSU Is optimised for the ICU, Trauma, ED and OR. CereTom® produces real-time, high-quality low-contrast images at the site of triage.



The MSU is an innovation in pre-hospital stroke treatment with the facility of telemetry as well as thrombolytic therapy bringing hospital services directly to the patient by providing acute stroke care management. The MSU provides services such as imaging, mobile laboratories, telemedicine, appropriate medication, and assessment tools. It reduces the time between the onset of symptoms and treatment.

A large number of the Assamese indigenous population have hypertension, which is the largest single risk factor of stroke, between 33% to 60.8%. Anecdotal reports and hospital-based studies show a huge number of strokes in Assam – a large portion of which are addressed by the Baptist Hospital. 50% of the strokes in Assam are haemorrhagic strokes, whereas it accounts for only about 20% of the strokes in the rest of India.

The Indian Council of Medical Research [ICMR] initiated to provide stroke treatment through our state-of-the-art Mobile Stroke Unit in Tezpur and Dibrugarh area of Assam, which was inaugurated on 28th September 2020. The staff of the MSU was trained online in this regard by specialist neurologists on a protocol that included Stroke Clinical Assessment, monitoring of risk factors and vital parameters, and other supportive measures like management of Swallow assessment in addition to starting the rehabilitation process and advising on long term care at home. Further a multi-disciplinary team of doctors was formed for the purpose of providing consultancy through telemetry. Also, training manuals were developed for doctors, paramedics, CT technicians, and drivers of the MSU.

Guidelines for the management of acute ischemic strokes consist of taking a non-contrast CT (NCCT) study of the brain as well as a CT or MRI angiography and perfusion and thrombolysis administration of rTPA (Tissue Plasminogen Activator) within a period of 4.5 hours from the onset of symptoms. The doctors at BCH give primary care for strokes using a CT machine and teleradiology reporting, and after basic NCCT they may refer patients to a tertiary facility as required. In case thrombolysis is needed, the ER doctors consult with neurologists by sharing NCCT images on their phones, following a Tele stroke model. Severe cases of head trauma are referred to tertiary facilities for further management.

A study done at Tezpur showed that after the MSU was launched, there was a substantial improvement in the quality of life of patients as well as a decrease in deaths compared to the pre-MSU phase. This is a vital development in stroke care particularly in low and middle-income countries like India, helping strengthen the peripheral small hospitals that do not have specialists and are almost always the first stop for patients in emergencies such as strokes.

<https://qure.ai/time-is-brain-ai-helps-cut-down-stroke-diagnosis-time-in-the-himalayan-foothills/>
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