Mombasa

A shortage of neurosurgeons and a lack of knowledge of neuroendoscopic management of hydrocephalus limits modern care in sub-Saharan Africa. Hence, a mobile teaching project for endoscopic third ventriculostomy (ETV) procedures and a subsequent program to develop neurosurgery as a permanent specialty in Kenya and Zanzibar were created and sponsored by the Neurosurgery Education and Development Foundation (NED) and the Foundation for International Education in Neurological Surgery. The objective of this work was to evaluate the results of surgical training and medical care in both projects from 2006 to 2013.

Two portable neuroendoscopy systems were purchased and a total of 38 ETV workshops were organized in 21 hospitals in 7 different countries. Additionally, 49 medical expeditions were dispatched to the Coast General Hospital in Mombasa, Kenya, and to the Mnazi Mmoja Hospital in Zanzibar.

From the first project, a total of 376 infants with hydrocephalus received surgery. Six-month follow-up was achieved in 22%. In those who received follow-up, ETV efficacy was 51%. The best success rates were achieved with patients 1 year of age or older with aqueductal stenosis (73%). The main causes of hydrocephalus were infection (56%) and spina bifida (23%). The mobile education program interacted with 72 local surgeons and 122 nurses who were trained in ETV procedures. The second project involved 49 volunteer neurosurgeons who performed a total of 360 nonhydrocephalus neurosurgical operations since 2009. Furthermore, an agreement with the local government was signed to create the Mnazi Mmoja NED Institute in Zanzibar.

Mobile endoscopic treatment of hydrocephalus in East Africa results in reasonable success rates and has also led to major developments in medicine, particularly in the development of neurosurgery specialty care sites [1)]

1)
Piquer J, Qureshi MM, Young PH, Dempsey RJ. Neurosurgery Education and Development program to treat hydrocephalus and to develop neurosurgery in Africa using mobile neuroendoscopic training. J Neurosurg Pediatr. 2015 Jun;15(6):552-9. doi: 10.3171/2014.10.PEDS14318. Epub 2015 Mar 6. PubMed PMID: 25745948.