Korle-Bu Neuroscience Foundation

https://kbnf.org/

Korle-Bu Neuroscience Foundation (KBNF) is a Canada based charity enhancing the delivery of quality brain and spinal medical care in West Africa and beyond. The vision is to alleviate the suffering of West Africans with a special focus on those affected by diseases of the brain and spine, and to address related health care issues.

KBNF has been working with the Liberian Government since 2014 to develop its neurosurgery capacity, but the program is still in its infancy suffering setbacks from Ebola, lack of trained medical professionals across all disciplines, and extremely limited resources. KBNF works to address these deficits with shipments of equipment and supplies and annual medical missions.

Liberia recently employed the first neurosurgeon in the country's history. In a country with a population of 4.7 million people and staggering rates of cranial and spine trauma, as well as hydrocephalus and neural tube defects, neurosurgery is considered a luxury. A study documents the experience of a team of neurosurgeons, critical care nurses, scrub technicians, nurses, and Biomedical engineering who carried out a series of neurosurgical clinics and complex brain and spine surgeries in Liberia. Specifically, Bowen et al. aimed to highlight some of the larger obstacles, beyond staff and equipment, facing the development of a neurosurgical or any other specialty practice in Liberia.

The institutions, in collaboration with the Korle-Bu Neuroscience Foundation, spent 10 days in Liberia, based in Tappita, and performed 18 surgeries in addition to seeing several hundred clinic patients. This is a retrospective review of the cases performed along with outcomes to investigate obstacles in providing neurosurgical services in the country.

Before arriving in Liberia, they evaluated, planned, and supplied staff and materials for treating complex neurosurgical patients. Sixteen patients underwent 18 surgeries at a hospital in Tappita, Liberia, in November 2018. Their ages ranged from 1 month to 72 years (average 20 years). Five patients (28%) were female. Ten patients (56%) were under the age of 18. Surgeries included ventriculoperitoneal shunting (VP-shunt), lumbar myelomeningocele repair, encephalocele repair, laminectomy, and a craniotomy for tumor resection. Ten patients (55%) underwent VP-shunting. Two patients (11%) had a craniotomy for tumor resection. Three patients (17%) had laminectomy for lumbar stenosis. Two patients (11%) had repair of lumbar myelomeningocele.

After an aggressive and in-depth approach to planning, conducting, and supplying complex neurosurgical procedures in Liberia, the greatest limiting factor to successful outcomes lie in real-time is access to health care, which is largely limited by overall infrastructure. The study documents the experience of a team of neurosurgeons, critical care nurses, scrub technicians, nurses, and biomedical engineers who carried out a series of neurosurgical clinics and complex brain and spine surgeries in Liberia. Specifically, they aimed to highlight some of the larger obstacles, beyond staff and equipment, facing the development of a neurosurgical or any other specialty procedural practice in the country of Liberia. Most notably, they focused on infrastructure factors, including power, roads, water, education, and overall health care [1].

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Bowen I, Toor H, Zampella B, Doe A, King C, Miulli DE. Infrastructural Limitations in Establishing Neurosurgical Specialty Services in Liberia. Cureus. 2022 Sep 20;14(9):e29373. doi: 10.7759/cureus.29373. PMID: 36284802; PMCID: PMC9584543.