

Why scientists operated on brain of awake patient

The surgery was done jointly by medical experts from Uganda and the US.

BY TONNY ABET

A 47-year-old man has been discharged after successfully undergoing brain surgery while awake at Mbarara Regional Referral Hospital (MRRH), the medical team confirmed to the *Daily Monitor* yesterday.

This monumental surgery, craniotomy, involved removing part of the bone from the skull to expose the brain for a surgical intervention to remove a tumour inside the patient's head.

The surgery was performed by a joint team of medical experts from Uganda and the United States. The team included experts from Mbarara University of Science and Technology (MUST) and MRRH, working in partnership with University of Colorado Anschutz Medical Campus (CU Anschutz) and the College of Surgeons of East, Central and Southern Africa (COSECSA).

Prof David Kitya, a neurosurgeon from MUST/MRRH, told *Daily Monitor* that the patient had a tumour located in a sensitive region of the brain responsible for sensory processing, language, and spatial awareness. He said to ensure the tumour was removed without causing permanent paralysis or speech loss, the surgical team kept the patient fully conscious throughout the operation.

"The surgery was done on Friday, February 27. The conditions that can be handled through such [awake craniotomy] procedures are mainly swellings -like tumours," Prof Kitya explained. "We do that because when the tumour is growing near the areas we call eloquent areas, we don't want to injure them by simply opening."

"So, we want to operate when you are communicating with the patient so you don't injure and it is that communication and stimulation



THE SURGEONS INVOLVED

MUST and USA medical experts conduct the neurosurgical operation at Mbarara Hospital on February 27. PHOTO/COURTESY

which helps us to avoid that so we do it while the patient is awake," he added. The neurosurgeon also explained that the eloquent areas in the brain are many.

Scientists said by interacting with the patient in real-time, the surgeons can "map" the brain's functional boundaries. This allows the neurosurgeons to achieve maximum tumour removal while preserving the patient's quality of life.

"One-week post-surgery, the patient is fully recovered, walking, and speaking, a testament to the precision of this pioneering technique," MUST said in a March 9 statement.

Dr Ryan Ormond, a neurosurgeon who participated in this operation, said: "Through awake craniotomy and intraoperative electrophysiological monitoring, surgeons can remove tumours while preserving speech, cognition and motor function."

How it is done

According to information from the US' National Brain Tumour Society (NBTS), a patient is informed and prepared before undergoing such a procedure.

This procedure does not mean the patient remains fully awake throughout the entire operation. Instead, sedation is carefully managed and titrated to achieve the best possible outcome, including periods when the patient must be awake to participate in brain mapping and functional monitoring.

"Once the patient heads back to the operating room, they'll be sedated and then positioned on the table in a way to give the neurosurgeon the best view of the tumour," information from NBTS read in part.

It added: "After the patient is sedated, the neurosurgeon will create an opening in the skull to access the necessary region of the brain. Once the team is ready to begin the awake brain mapping portion of the surgery, the patient will be woken up when the anaesthesiologist temporarily stops or reduces the sedative medications."

Sr Beatrice Katusiime from MRRH told this publication that the surgery involved a range of experts. She also provided information about the condition of the patient. "The patient is doing fine and was discharged. We have a big behind this: neurosurgeons, nurses, biomedical engineers, anaesthesia team...."