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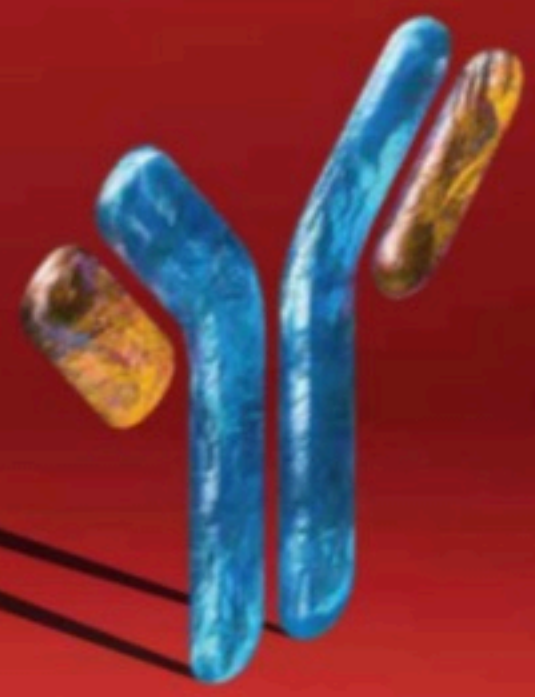
MONOCLONAL ANTIBODIES TURN OUT TO BE A REAL LIFE-SAVER IN CERTAIN HIGH-RISK COVID-19 PATIENTS



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What is epilepsy surgery?

Even healthcare providers are unaware of the fact that surgery is the only treatment option for nearly half the patients with drug-resistant epilepsy

The first epilepsy surgery in India was performed at Christian Medical College, Vellore in 1952 by Prof Jacob Chandy. Sixty-nine years later, it is quite disappointing that only 2 in 1000 eligible epilepsy surgery candidates get operated on every year in India today, creating a huge surgical treatment gap.

A seizure is an abnormal electrical activity within the brain. When seizures become recurrent or chronic, the condition is called epilepsy. Epilepsy prevents normal brain development in children. There are different types of epilepsies.

Epilepsy and seizures cause psychological stress in both the patient and the caregivers. These patients need to be on antiepileptic medications (AEDs) regularly, which increases the risk of the development of complications related to these medications. This also causes a significant financial burden to the family. Some epilepsies have the potential to even kill the patient.

The majority of patients with epilepsy are cured with medications alone. However, about one-third of these patients have drug-resistant epilepsy (DRE).

The fact that epilepsy surgery is the "only" treatment option for about 50% of patients with DRE epilepsy is unknown to a vast majority of people, including health care providers.

Some patients with DRE can have frequent disabling seizures despite the administration of adequate antiepileptic medications. Patients with DRE should be evaluated thoroughly to see if they are surgical candidates in a "comprehensive epilepsy programme" (CEP) by a group of doctors that form the "comprehensive epilepsy team" (CET). The CET is formed by epileptologists (neurologists trained in epilepsy), epilepsy surgeons (neurosurgeons trained in epilepsy surgery), neuroradiologists, neuropsychologist and health care providers from other specialties.

Before selecting patients for epilepsy surgery, patients are subjected to a series of investigations based on the type and complexity of the seizure type. The tests done commonly include MRI of the brain, video EEG and PET scans. If these tests provide inadequate data for diagnosis, the CET proceeds to perform "invasive tests". Invasive tests are done by direct placement of the electrodes on the brain after opening the skull. These electrodes directly record the electrical activity from the surface of the brain during seizures. After obtaining data from these tests, the CET decides if the patient is a candidate for epilepsy surgery or not.

Epilepsy surgery aims at either resection of the electrically abnormal brain or disconnection of the networks that spread the seizures from their site of origin to the rest of the brain.

The surgical treatment of epilepsy has improved tremendously in the past few decades with innovations in diagnostic tools and the development of newer, refined neurosurgical techniques, making it relatively a safe option.

Reduction in seizures after epilepsy surgery ranges from about 50-90%. Studies have shown that proceeding with epilepsy surgery is cost-effective in the long run and gives better seizure control compared to patients who opt against surgery and continue taking medications.

Currently, it is estimated that there are about 40 centres in India with CEP, equipped with state-of-the-art diagnostic tools and performing more than 700 epilepsy surgeries every year. The outcome of patients undergoing epilepsy surgery in India today is comparable to the results from developed countries.

Hence programmes to improve awareness among the public and healthcare providers about the usefulness of epilepsy surgery are important. Doctors treating patients with epilepsy should have a low threshold to refer patients to the CET for evaluation. The healthcare sector in India should focus on increasing the number of CEPs to handle the existing, massive load of patients requiring epilepsy surgery. ■

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The author is a senior epilepsy surgeon working in Lisie Hospital, Ernakulam. He has authored many chapters and published articles in peer-reviewed journals in the field of epilepsy.