Pharmacoresistant Epilepsy

Epilepsy is defined as the repeated occurrence of unprovoked seizures. It is one of the most common neurological disorders in our country, affecting approximately 2.5 million Americans of all ages and backgrounds.

In most cases, seizures and epilepsy can be fully controlled with the use of anticonvulsant medications (also known as antiepileptic medications). The goal of epilepsy therapy is for patients to be free of seizures and medication side effects. Recent studies have confirmed that complete seizure control is associated with the greatest improvements in quality of life. This is, in part, why it is so important for patients who experience uncontrolled seizures to be referred to physicians and epilepsy centers with expertise in the field of epilepsy. Special investigations may be necessary to confirm the diagnosis of epilepsy and explore other treatment options.

What is pharmacoresistant epilepsy?

Various definitions are used to describe the concept of pharmacoresistant epilepsy. One of the simplest is that medical therapy fails to sufficiently control seizures, and therefore patients no longer have the ability to maintain their quality of life. A more practical and widely accepted definition is the failure to achieve seizure control with the first or second trial of an anticonvulsant medication given at the appropriate daily dosage. Based on modest estimates, pharmacoresistant epilepsy is seen in at least one third of individuals with a diagnosis of epilepsy.

Why drug resistance happens is not well understood. Investigators worldwide are tirelessly conducting experiments to help better understand and one day overcome the problem of pharmacoresistance. Today, however, despite the availability of newer anticonvulsant medications and a promising pipeline of future medications, currently available drug therapies have limited success in patients with an established diagnosis of pharmacoresistant epilepsy.

What is the impact of pharmacoresistant epilepsy on patients' health?

Pharmacoresistant epilepsy (also known as medically-intractable or refractory epilepsy) is often a chronic, lifelong problem and is associated with significant disease-related costs (treatment and societal). Uncontrolled seizures may have debilitating psychosocial consequences and carry a significant risk of injuries and/or death. It is not uncommon for patients with pharmacoresistant epilepsy to also experience feelings of significant depression and/or anxiety.
What treatment options are available for patients with pharmacoresistant epilepsy?

If anticonvulsant medications have failed to control your epilepsy or you experience intolerable side effects from anticonvulsants, you may be a candidate for epilepsy surgery. Approximately half of the patients with a diagnosis of pharmacoresistant epilepsy are potential candidates for epilepsy surgery. Successful epilepsy surgery may substantially reduce or eliminate disability. Unfortunately, only a small percentage of potential candidates for epilepsy surgery are currently referred to well-equipped, multi-disciplinary epilepsy surgery centers.

Are there other treatment options besides surgery?

In some cases, surgery is not possible. Seizures may come from multiple areas of the brain or the risk of surgery to brain function may be too high. In these situations, other options are available. New treatments for epilepsy are continually being developed, and it may be possible to participate in an experimental trial of a new drug or other therapy.

The Vagus Nerve Stimulator is yet another option for patients with pharmacoresistant epilepsy who are not candidates for epilepsy surgery. The Vagus Nerve Stimulator is an FDA-approved treatment for epilepsy and involves minor surgery to implant a pacemaker-like device under your skin near your collarbone. The device produces a weak electrical signal that travels along the vagus nerve in your neck to your brain. The signals help prevent the electrical brain bursts that cause seizures. Ask your doctor about this and other alternative treatments.

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