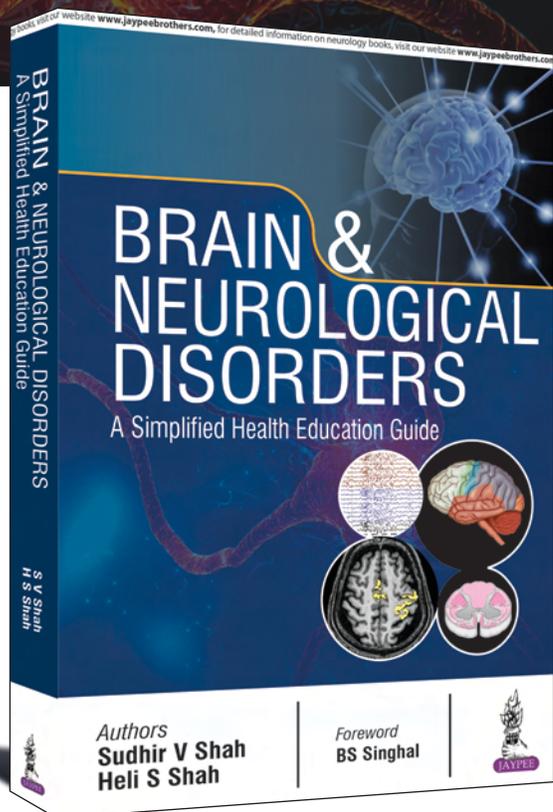


Brain & Neurological Disorders

A Simplified Health Education Guide



First of its Kind Book on

Patient Education in Neurology



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Key Features

- The book is a humble attempt to fill the gap in the understanding of neurological disorders by providing authentic, research backed information in a simple and lucid manner for one and all
- This edition is primarily intended to benefit the patients, their families, and care givers. It will also be useful for physicians, medical students, paramedics, and physiotherapists who have to counsel the patients and their families as well as nurse practitioners
- The purpose of this book is to educate people in a fair depth and help them navigate through complexities of neurological disorders as and when affected/confronted. It is also to enlighten and inspire community towards prevention as well as early detection of diseases, all in a reassuring and reader friendly language
- Supplemented with a large number of figures and diagrams, it further makes learning and understanding simpler for everyone
- Presented in a simple and lucid format, the book is for all who are keen to learn but do not have the time to pool all the relevant authoritative information concisely in a small span of time
- Written with a noble and benevolent cause, the authors wish to strengthen the scholarship imbued with a spirit of compassion and life. This will serve the purpose of authors to help humanity by saving lives and preventing morbidities.

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Epilepsy

We don't know how strong we are until being strong is the only choice we have.

Epilepsy Awareness

Points to Ponder

- Epilepsy is a chronic noncommunicable disorder of the brain affecting people of all ages.
- Around 50 million people suffer from epilepsy worldwide.
- Nearly 80% of the people with epilepsy live in developing countries.
- Epilepsy responds well to treatment in about 70% of cases.
- Affected people in developing countries do not get the same quality of care as those in developed countries.
- People with epilepsy and their families suffer from social stigma in many parts of the world.

INTRODUCTION

The disorder of epilepsy has existed for over 3,000 years. Indian school of medicine, which developed and refined during the Vedic period of 600-1000 BC, the first recorded description of the complex disorder. Hippocrates (400 BC) described epilepsy as "epilepsia" which is another ancient and detailed account of epilepsy was in the textbook of medicine comprising 40 tablets dated to 1500 BC, discovered in the British Museum in London.

A single seizure cannot be labeled as epilepsy. Epilepsy is characterized by repeated epileptic seizures from spontaneous unprovoked electrical discharges of nervous system (gray matter disease).

NEW RESEARCHES

Scientists are studying the underlying causes of epilepsy in children, adults, and the elderly, as well as seizures that occur following brain trauma, stroke, and brain tumors to develop new models. The genetic studies may help the doctors to prevent these disorders and predict which treatments will be most beneficial to individuals with specific types of epilepsy. Scientists also continued their research on how neurotransmitters interact with brain cells to control nerve firing and how neuronal cells in the brain contribute to seizures.

Researchers funded by the National Institutes of Health in USA have developed a flexible brain implant that could one day be used to treat seizures. Scientists are constantly improving the quality of MRI and other brain scans that may assist in diagnosing the epilepsy and identify the source or focus of the seizures in the brain. Other areas of study include prevention of seizures and the role of inflammation in epilepsy. Several trials on newer, experimental drugs and surgical interventions are ongoing.

Pearls of Wisdom

- Sudden disturbance in the rhythmic electrical impulses in the brain may cause recurrent seizures, presenting as sudden appearance of a variety of short-lasting symptoms and signs, such as changes in the level of consciousness (or many a times loss of consciousness), convulsions, jerks, or abnormal gestures or behavior. Recurrent seizures (epilepsy) are present in around 1% of the total world population (more than 50 million people).
- Epilepsy may present as an early childhood disease.
- Diagnosis are of various kinds, and specific types of medicines are chosen according to the type of epilepsy, epileptic syndromes, and socioeconomic status of the patient.
- Epilepsy can be confused with many other diseases like syncope or hysteria, which cause seizure-like episodes, but they are not true seizures.
- Epilepsy is a neurological disorder, not a mental illness, and has to be recognized, family members and the community should support such patients.
- Epilepsy exists with or without treatment. Antiepileptic drugs are effective in producing remission. Drugs for epilepsy need to be taken for at least 2 or 3 years or more according to doctor's advice. Any education, use drug induced adverse effects of a pregnancy in female patient suffering from epilepsy, should be quickly brought to doctor's attention.
- Some cases of epilepsy remit with special surgery.
- Special care is required while handling specific subgroups of population, the elderly people, women in child-bearing age group, pregnant and lactating women, and children below age of 12 years. The drug selection and the dose may be different, and they require closer monitoring.
- With newer drugs, surgeries, and expansion of upcoming scientific research, we can say with confidence that the present and the future of the people with epilepsy is certainly brighter than it was in the past.

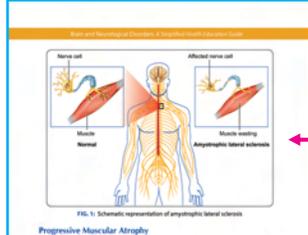


FIG. 1: Schematic representation of amyotrophic lateral sclerosis.

Progressive Muscular Atrophy

It is another type of primary MND in which the pyramidal fibers are not affected and upper motor neurons are not seen (like both palsy and spastic paraparesis). In this disease, the pyramidal fibers are affected, but progression is slower than in other MNDs. This is a disease of the lower motor neurons (LMNs). It is characterized by weakness, wasting, and atrophy of the muscles. The disease starts in the hands and then spreads to the lower limbs. Symptoms may include muscle wasting, clumsy hand movements, and muscle weakness. The weakness and atrophy may lead to contractures. The disease is progressive and can be fatal.

MANAGEMENT OF A SEIZURE ATTACK

During an epileptic attack, the following care should be taken (Fig. 4):

- The patient should be made to lie sideways and clothes should be loosened.
- No objects should be placed in mouth of the patient suffering from an epileptic attack since this may cause injury to the teeth and breathing difficulty. If the seizure does not stop within 3 minutes, immediately shift the patient to the nearest hospital for proper treatment.

FIG. 4: First aid measures for patients with seizures.

More than **200** Images & Illustration

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