




Central Nervous System (CNS) Diseases

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Epilepsy


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- Epilepsy is the clinical manifestation of abnormal electrical activity of the brain, which leads to motor activity and altered states of consciousness.
 - The main factors that precipitate such seizures include severe stress, alcoholic drinks, hypoglycemia, severe pain, .



The epileptic seizure usually presents in three phases

- 1) Aura
- 2) convulsion phase
- 3) Post convulsion phase.

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- The aura symptoms, i.e., those that the patient feels before the seizure occurs. Presenting symptoms include tinnitus, yawning, dizziness, anxiety, and characteristic smells. The epileptic aura lasts a few seconds.
 - The convulsion phase follows, which is characterized by persistent spasmodic movements of the head, body, and limbs. Forcible jaw closing, rolling of the eyes upward or to the side and pinkish froth from the mouth are also noted. the face becomes cyanotic.

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- The post convulsion phase follows, which is characterized by disturbances of the consciousness state, pallor, and weakness. This phase has variable duration and may last 10–30 min, with the risk of airway obstruction by mucous secretion, vomit, or the tongue falling posteriorly against the posterior pharyngeal wall. After the epileptic seizure, the patient regains consciousness, but feels exhausted and may have a headache, but does not recall the seizure itself.

MEDICAL MANAGEMENT

The medical management of epilepsy usually is based on long-term drug therapy.

- 1) Phenytoin (Dilantin),
- 2) carbamazepine (Tegretol),
- 3) valproic acid are considered first-line treatments.

Dental Management of the Epileptic patient

1. Identification of patient by history

- i. Type of seizure
- ii. Age at time of onset
- iii. Medications
- iv. Frequency of seizures
- v. Date of last seizure
- vi. Known precipitating factors.
- vii. History of seizure-related injuries.

2.Short appointments, as painless as possible & Reduction of stress.

Administration of small amounts of local anesthetic.

3.Provision of normal care: Well-controlled seizures pose no management problems.

4.If questionable history or poorly controlled seizures, consultation with physician before dental treatment— may require modification of medications.

5.Possibility of bleeding tendency in patients taking valproic acid (Depakene) or carbamazepine (Tegretol) as the result of platelet interference.

6. Management of grand mal seizure:

- a. Possible placement of a ligated mouth prop at the beginning of the procedure.
- b. Chair back in supported supine position.

7. Management of the seizure.

- a. Clear the area.
- b. Turn the patient to the side (to avoid aspiration).
- c. Do not attempt to use a padded tongue blade.
- d. Passively restrain.

EPILEPSY COMMON SYMPTOMS



Loss of
consciousness



Weakness



Anxiety



Staring



Contraction and jerking
of muscles



Confused speech

staring

contraction and jerking

confused speech

Don't put anything in their mouth

Don't restrain them

Give the person time to recover

Cushion the head

Make the person safe

Time the seizure



Roll the person into the recovery position after the seizure has stopped

Protect their dignity

Roll the person into the recovery position after the seizure has stopped



Cerebrovascular Accident



Definition

- A cerebrovascular accident (stroke) is an acute neurologic disability secondary to deficit of a specific area of the brain. This deficit is due to focal necrosis of brain tissue, because of intracranial hemorrhage, cerebral embolism, or thrombosis.

TYPES OF CVA

- I. Ischemic stroke** (most common type): Induced by thrombosis or occlusion of a cerebral blood vessel by distant emboli. Its risk increased by atherosclerosis and cardiac pathosis (myocardial infarction, atrial fibrillation).
- II. Hemorrhagic stroke:** Hypertension is the most important risk factor for intracerebral hemorrhagic stroke.

signs and symptoms

- dizziness, vertigo, severe headache, perspiration, pallor, etc. These signs and symptoms may appear suddenly or gradually, while the patient may also present with loss of consciousness, upon which he or she rarely has time to mention anything at all. slow breathing, rapid pulse rate, partial or complete paralysis of one or both limbs of one side of the body, difficulty in swallowing, loss of expression or inability to move facial muscles, loss of tendon reflexes and an inability to rotate the head and eyes towards the side of cerebral damage (which is the opposite side of that which presents paresis) with dilation of the pupils, which do not react to light.
- Patients with a history of a cerebrovascular accident must avoid surgical dental care for 6 months after the stroke. After this time, they may be treated, following consultation with their physician, after taking certain

Dental management

- 1) Blood pressure should be monitored before and during the surgical procedure (blood pressure must be controlled).
- 2) Determine risk for bleeding problems in patients taking anticoagulant drugs, and minimize perioperative bleeding.
- 3) Short appointment, as painless as possible, with gentle manipulations.
- 4) Use minimum amount of anesthetic containing vasoconstrictor.
- 5) Use measures that minimize hemorrhage (atraumatic surgery, pressure, gelfoam, suturing), as needed.
- 6) If dental care is necessary within 6 months of the stroke, then it should be provided in a hospital.



Thank you