Reflex epilepsy and reflex seizures of the visual system: a clinical review

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Abstract

Reflex epilepsy of the visual system is characterised by seizures precipitated by visual stimuli. EEG responses to intermittent photic stimulation depend on the age and sex of the subject and on how stimulation is performed: abnormalities are commonest in children and adolescents, especially girls. Only generalised paroxysmal epileptiform discharges are clearly linked to epilepsy. Abnormal responses may occur in asymptomatic subjects, especially children. Photosensitivity has an important genetic component. Some patients are sensitive to patterns, suggesting an occipital trigger for these events. Myoclonus and generalised convulsive and nonconvulsive seizures may be triggered by visual stimuli. Partial seizures occur less often and can be confused with migraine. Although usually idiopathic, photosensitive epilepsy may occur in degenerative diseases and some patients with photosensitive partial seizures have brain lesions.Sunlight and video screens, including television, video games, and computer displays, are the commonest environmental triggers of photosensitive seizures. Outbreaks of triggered seizures have occurred when certain flashing or patterned images have been broadcast. There are regulations to prevent this in some countries only. Pure photosensitive epilepsy has a good prognosis. There is a role for treatment with and without antiepileptic drugs, but photosensitivity usually does not disappear spontaneously, and then typically in the third decade.
Reflex seizures are epileptic seizures that are consistently induced by a specific stimulus or trigger making them distinct from other epileptic seizures, which are usually unprovoked. Reflex seizures are otherwise similar to unprovoked seizures and may be focal (simple or complex), generalized, myoclonic, or absence seizures. Epilepsy syndromes characterized by repeated reflex seizures are known as reflex epilepsies. Photosensitive seizures are often myoclonic, absence, or focal seizures in the Reflex Epilepsies and Reflex Seizures. Advances in Neurology Vol 75. Philadelphia: Lippincott-Raven Publishers, 1998: 123–138. 38. Zifkin, BG, Kasteleijn-Nolst Trenité, D. Reflex epilepsy and reflex seizures of the visual system: a clinical review. Epileptic Disord 2000; 2: 129–136. 39. Stefansson, SB, Darby, CE, Wilkins, AJ et al.