



Reading Epilepsy

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For a long time it has been known that seizures could be evoked in certain epileptic individuals by a discrete physiologic or psychologic stimulus. The term reflex epilepsy is reserved for this small subgroup. Forster(1) has classified these seizures in accordance with their evocative stimuli into five types: - (1) Visual-flickering light, visual patterns & specific colors especially red, leading to rapid blinking or eye closure; (2) Auditory-sudden unexpected noise (startle), specific sounds, musical themes & voices; (3) Somatosensory-either a brisk unexpected tap or sudden movement after sitting or lying still or a prolonged tactile or thermal stimulus to a certain part of the body (Hot Water Epilepsy); (4) Writing or reading words or numbers and (5) Eating.

Reading epilepsy is a rare benign, non progressive syndrome characterized by reading-provoked sensorimotor symptoms affecting the oral-buccal-lingual-facial muscles that are involved in reading aloud(2). However, reading aloud usually not required to trigger the seizures. As a result, some authorities have recommended renaming the condition language-induced Epilepsy(3). Our case was 9 years old male with no family history, presented as reading epilepsy which was misdiagnosed for six months as non-organic seizures.

A 9 year old male child used to visit the pediatricians at different occasions. Always parents complained that most of the times child starts with abnormal movements of jaw, face and sometimes myoclonic jerks while reading. He has 3-4 such attacks during school also. Parents and teachers correlated it as child disinterest toward study. Each attack used to last for 1-3 minutes. These attacks were more when he used to read aloud and specifically English language. He had about twenty attacks in six months time and this has disturbed the child including his studies. On examination child was well built and neurologically there was no deficit fundus

examination was normal. His BP- 110/70 mm/Hg. & pulse rate-80/minute, ECG WNL. His biochemical parameters, sugar, calcium, magnesium, LFT, RFT, haemogram, blood counts all were normal. His CT scan head was normal. His EEG was done on 16 channel digital E.E.G. machine which showed spike wave and polyspike discharges (Fig. 1).

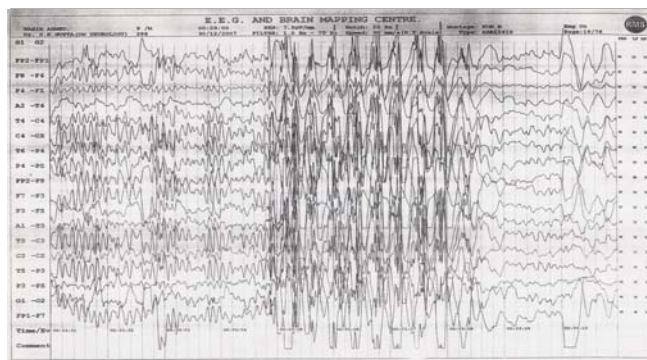


Fig.1 Showing EEG Changes

The child was diagnosed as reading epilepsy and was put on sodium valproate 300 mg. twice a day. His seizure completely subsided and now he is doing well in his studies and he is no more afraid of reading.

Reading epilepsy is a rare, benign non-progressive syndrome, characterized by reading-provoked sensorimotor symptoms affecting the oral-buccal-lingual-facial muscles that are involved in reading aloud (2). This condition is accompanied by a positive family history of a similar disorder in as many as one fourth of cases our patient has no family history and was a sporadic case. These patients as described by Krishnan *et al* (4), presents as myoclonic, jerking or tonic movements of jaw. Some patients also report with abnormal sensations such as stiffness, numbness or tightness during the seizures. Usually disease starts at puberty, the average age of onset is 17 years with symptoms starting as young as 10 years

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of age(4). Cases have been described that overlap clinically with benign partial epilepsy of childhood (BPEC), with Juvenile myoclonic epilepsy (JME) and with absence epilepsy (5, 6,7).

Our case was 9 year old male child who used to get abnormal movements of jaw, face and myoclonic jerking while reading English language. All investigations were normal but detailed history & EEG gave the final diagnosis and child was treated with sodium valproate and is doing well and free of seizures.

This rare case has been presented so that clinicians should be aware and take history properly to reach a final diagnosis and to treat this benign reflex epilepsy syndrome effectively.

References

1. Forster FM: Reflex Epilepsy, Behavioral Therapy, and Conditional Reflexes, Springfield, IL, Charles C Thomas, 1977.
2. Wolf P, Reading epilepsy. In : Roger J, Bureau M, Dravet C, Dreifuss F, Perret A, Wolf P, eds. *Epileptic Syndromes in Infancy, Childhood & Adolescence*, 2nd edn. London : John Libbey and Company, 1992 .pp. 281-98.
3. Koutroumanidis M, Koepp MJ, Richardson MP et al. The variants of Reading Epilepsy. A clinical & video-EEG study of 17 patients with reading-induced seizures. *Brain* 1998; 121 : 1409-27.
4. Radhakrishnan K, Silbert PL, Klass DW. Reading epilepsy. An appraisal of 20 patients diagnosed at the Mayo clinic, Rochester, Minnesota, between 1949 & 1989, and delineation of the epileptic syndrome. *Brain* 1995; 118 : 75-89.
5. Valenti MP, Tinuper P, Cerullo A, Carcangiu R, Marini C : Reading epilepsy in a patient with previous idiopathic & focal epilepsy with Centrotemporal spikes. *Epileptic Discord* 1999; 1 : 167-171.
6. Wolf P, Mayer T, Reker M. Reading epilepsy. Report of five new cases and further considerations on the pathophysiology. *Seizure* 1998, 7: 271-9.
7. Singh B, Anderson L, al Gashlan M, al Shahwan SA, Riela AR. Reading-induced absence seizures. *Neurology* 1995; 45 : 1623-4.

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