TEMPORAL EPILEPSY IN AN ADULT DUE TO COMPLEX MALFORMATION OF CORTICAL DEVELOPMENT

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ABSTRACT

We present the case of a 26 years right-handed old female with partial complex seizures due to a complex right temporo-parietal region with nodular heterotopia, polymikrogyria. Because the fear was the main complaint she was first referred to a psychiatric service.

Key words: heterotopia, polymikrogyria, epilepsy

CASE PRESENTATION

We present the case V.S. of a patient of 26 years old, female, right-handed.

There were no remarkable findings in her history from the childhood: she was the product of a normal full-term pregnancy; no febrile seizures in the infancy, no family history of epilepsy; also no trauma, no neuroinfections.

She developed normally, with high-school education.

At the age of 12 when she experienced **2 tonic-clonic seizures** during the night, with salivation, the tongue was bitten and urinary emission, with no memory of the crisis.

She didn't experience any tonic-clonic seizures, since then.

No treatment was initiated at that time.

At the age of 16 years old she begins to experience **complex partial seizures** with aura with a sensation of fear, with dysarthria and loss of consciousness – she is unresponsiveness. The duration of crisis is approximately 1 minute and the mean frequency is about 4 crisis/month.

Antiepileptic treatment was initiated. Different antiepileptic drug were tested in monotherapy and than in association carbamazepine, valproic acid, topiramate, levetiracetam, lamotrigine. By now she is treated with 400 lamotrigine/day, but the frequency of partial complex seizures remain 3-4/month.

Physical and neurological examination – are normal.

Video EEG monitoring revealed paroxistic discharges of sharp waves and spike-wave complex mainly on the right temporo-parietal regions, during awake and sleep. No seizures were recorded during a first day of monitoring.

Cerebral MRI revealed a **complex malformation of cortical development** of the right temporo-parietal region with nodular heterotopia, polymikrogyria – in the non-dominant hemisphere- and a posterior arahnoidal chist.

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DISCUSSIONS

The clinical presentation is suggests for temporal lobe epilepsy.

Because the fear was the main complaint she was referred first to a psychiatric service. Afterwards the psychiatrist referred her to the Neurological Department of the University Hospital of Bucharest.

Interictal EEG revealed a right temporo-parietal lateralisation of epileptiform discharges. Cerebral IRM was of a great value revealing the complex malformation of cortical development. We conclude that is a symptomatic epilepsy due to of right temporo-parietal region malformation with nodular heterotopia, polymikrogyria.

A pre-surgical assessment is planned with intracerebral EEG recording to evaluate the epileptogenic onset zone.

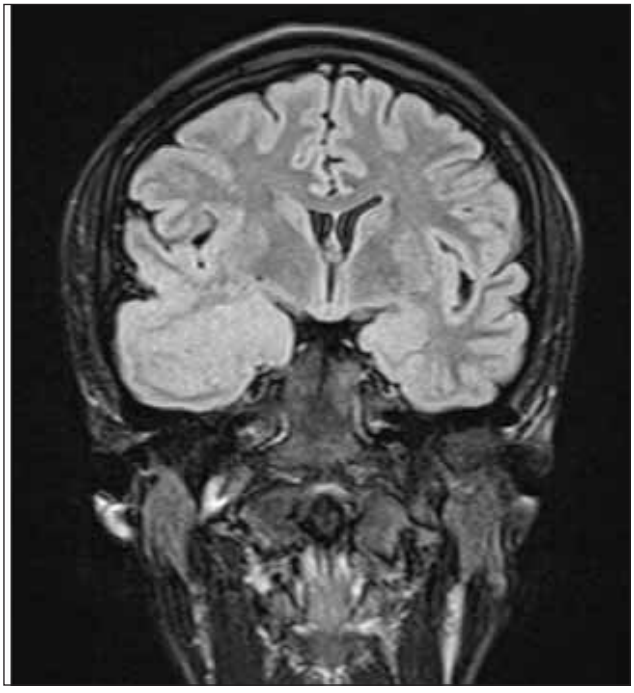

***FIGURE 1**. Cerebral IRM (T1) – right temporo-parietal complex malformation of cortical development (nodular heterotopia, polymikrogyria)*

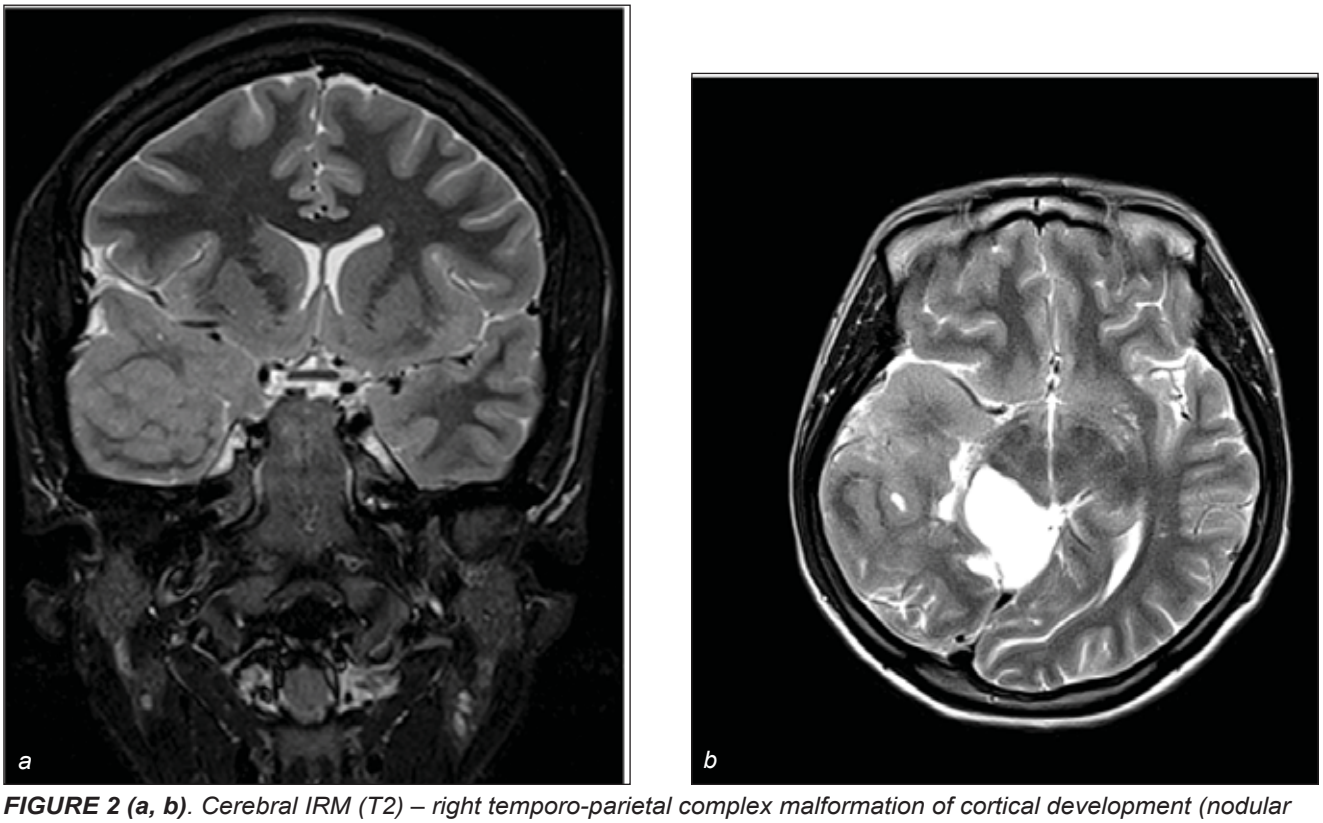

***FIGURE 2 (a, b)**. Cerebral IRM (T2) – right temporo-parietal complex malformation of cortical development (nodular heterotopia, polymikrogyria) posterior arahnoidal chist*

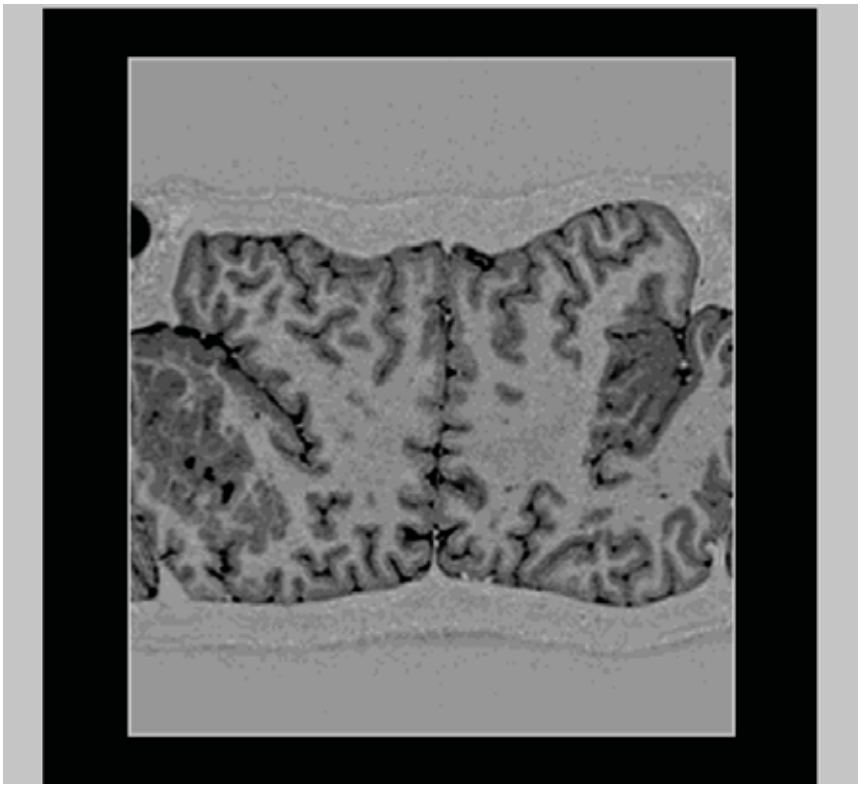

***FIGURE 3**. Cerebral IRM – curved section*

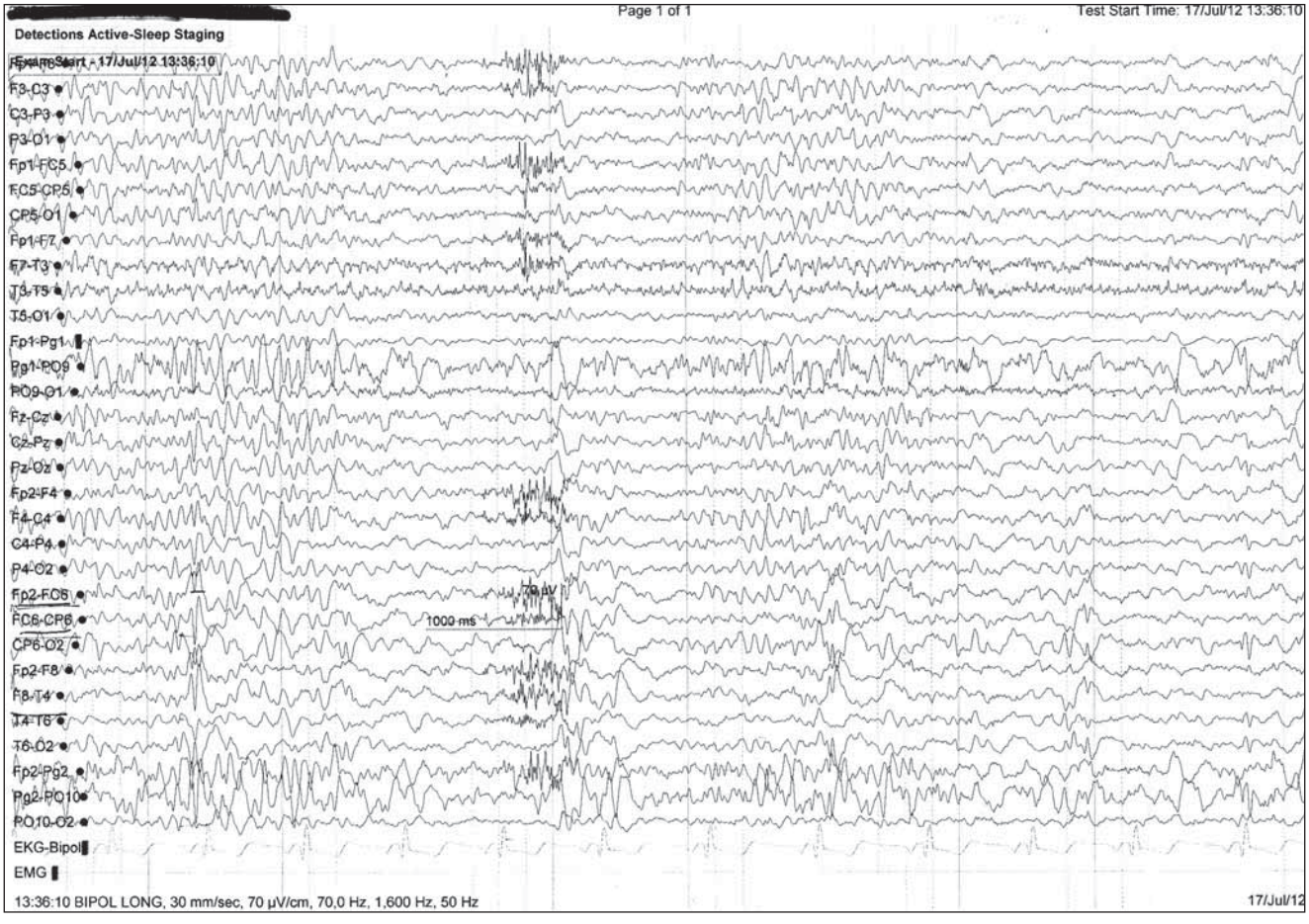

***FIGURE 4**. Interictal EEG – revealed paroxistic discharges of sharp waves and spike-wave complex mainly on the right temporo-parietal regions*

REFERENCES

1. **Ropper A.H., Brown R.H.** – Adams and Victor's Principles of Neurology, The McGraw-Hill Companies, Inc. 2010
2. **Kraemer G.** – *Epilepsy from A to Z*, Thieme, Stuttgart, New York, 2005
3. **Brodie M.J., Schachter S.C., Kwan P.** – Fast Facts: Epilepsy, Health Press, 2005
4. **Srour M., Rioux M.F., Varga C., Lortie A., Major P., Robitaille Y., Décarie J.C., Michaud J., Carmant L.** – The clinical spectrum of nodular heterotopias in children: report of 31 patients. Epilepsia. 2011 Apr; 52(4):728-37. doi: 10.1111/j.1528-1167.2010.02975.x. Epub 2011 Feb 14