TEMPORAL LOBE EPILEPSY AND PSYCHOSIS

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Background

Objectives

- To review psychosis secondary to temporal lobe epilepsy (TLE), focusing on pathogenesis, diagnostic challenges and treatment difficulties.

Methods

- Literature research conducted using “PubMed” database and search equation built using the MeSH terms "Schizophrenia Spectrum and Other Psychotic Disorders" AND “Epilepsy, Temporal Lobe”, restricted to articles written in English or Portuguese, over the last 15 years. Total of 83 results; 59 articles excluded.

Conclusion

- Scientific data about psychosis secondary to TLE is scarce. In the future, the clarification of the relationship between of TLE and the development of psychotic symptoms may contribute to the explanation of the aetiology and pathophysiology of psychosis, as well as for the development of diagnostic strategies and specific therapy for this disorder.

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Results

Aetiology

- Limbic system dysfunction seems to be a risk factor for psychosis in TLE (9).

- Patients with epilepsy have a 2 to 3-fold higher risk of developing schizophrenia than the general population (5,17,18). This higher prevalence of psychotic symptoms in patients with epilepsy suggests a common aetiology between schizophrenia and epilepsy (4,6,19): neurotoxic effects of epilepsy → insidious structure damage → increased time between the seizures and the appearance of psychotic symptoms (4).

Diagnosis

- There are main differences between schizophrenia and psychosis secondary to TLE (20). Psychosis in TLE is characterized by: proper mood and affects; infrequent cognitive decline (4-6); uncommon negative symptoms; better premorbid functioning (5,21); common visual (20% of the cases) and olfactive hallucinations (4,6,22); insight; frequent religious delusions ⇒ sometimes these differences are faint, with overlapping symptoms between schizophrenia and psychosis in TLE (4).

- Complementary diagnostic tests seem to have limited value (5,7). Example: a retrospective study (6) found no significant associations between acute psychosis and abnormal electroencephalogram (EEG). They concluded there was no indication for routine use of EEG in patients presenting with acute psychosis.

Treatment

- Currently, there are no clearly defined therapeutic protocols. General therapeutic recommendations state:
⇒ **Ictal**: demands a tight control of the epileptic seizure using anticonvulsant medications (5).
⇒ **Postictal**: treatment requires antipsychotic medication, with a slow weaning off period (23).
⇒ **Interictal**: treatment also requires antipsychotic medication, but the therapeutic strategies are similar to those used in primary psychosis. Treatment should be maintained after the psychotic symptoms' remission (5,23).
⇒ **Alternative**: recommendations of the International League Against Epilepsy (23,24,25) are sparse. They state that a decision requires a multidisciplinary team.

- ⇒ **Antipsychotic agents vs Anticonvulsants**: atypical antipsychotics seem to be the most appropriate for the treatment of psychotic symptoms in TLE → less epileptogenic profile (26). Antipsychotic agents can induce epileptic seizures between 0,1% and 1,5% of cases, but the patients also medicated with anticonvulsant drugs have a really low risk of having an epileptic seizure (5) → risks and benefits of antipsychotic and anticonvulsant agents must be considered altogether when stablishing the therapeutic protocol.