

Prognosis of epilepsies and start of antiepileptic drug treatment

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Slide 1: Studies of prognosis of epilepsy

Most hospital based studies revealed remission figures between 22 to 55% of patients. Community based studies showed much better figures around 70% of seizure-free patients. In conclusion: the prognosis of epilepsies is quite good with satisfactory treatment results in 70% of patients.

Slide 2: Cumulative probability of epilepsy remaining active

Several patients become free of seizures within 2 years after start of treatment. Afterwards only a few patients can be treated successfully.

Slide 3: Follow-up of patients of Innsbruck seizure clinic

Among 2290 patients of the Innsbruck seizure clinic with follow-up of at least 1 year, 1328 patients = 58% became free of seizures, 22,6% experienced a reduction in seizure frequency of at least 50% and 19,4% could not be treated successfully.

Slide 4: Prognosis according to different epilepsy syndromes

a) Generalized syndromes:

- CAE Childhood absence epilepsy
- JAE Juvenile absence epilepsy
- JME Juvenile miclonic epilepsy
- GM idiop. Epilepsies with idiopathic grand mal seizures
- LGS Lennox-Gastaut syndrome
- Questionable epilepsies undetermined whether generalized or focal

There is good prognosis for generalized idiopathic epilepsies, whereas the LGS have a bad outlook.

b) Focal and acute syndromes:

- Focal symptomatic focal minor symptomatic epilepsies
- Focal cryptogenic focal epilepsies without hints to a symptomatic etiology
- Oglioepilepsies epilepsies with sporadic seizures
- Acute symptomatic Acute symptomatic seizures (e.g. with encephalitis)
- Vascular epilepsy Epilepsies of vascular origin with onset at older age

Focal epilepsies generally carry a less favorable prognosis compared to generalized syndromes. Oglioepilepsies, acute symptomatic seizures and vascular epilepsies are considerably better off. Careful diagnosis is fundamental to prognosis statements.

Slide 5: Untreated populations – Ecuador and Kenya

Prognostic figures from developing countries showed that treatment can be successful even after a long course of untreated epilepsy. In Ecuador, the number of patients becoming free of seizures equals 53%, exactly the same as in Kenya. Summarizing these studies, it is worth to try treatment even in advanced cases. These results are especially encouraging for MDs in Myanmar.

Slide 6: Risk of recurring seizures after two unprovoked seizures

After Hauser, the risk of seizure recurrence increases from 33% to 73% after a second unprovoked seizure. In this case, the discussion about start of treatment seems to be closed. After a second issue, the patient has to be treated.

Slide 7: Seizure recurrence after a first seizure

According to the first seizure trial study, it became absolutely clear that treatment can reduce the risk of seizure recurrence. The probability of seizure-free time increases in statistical rates from 0,5 to 0,8 with AED treatment.

Slide 8: Epileptology of the first seizure presentation

An influential study of Krings et al. in Australia investigated the epileptology of the first seizure presentation by means of clinical, electroencephalographic and MRI examinations. Patients have been thoroughly investigated after a first generalized tonic-clonic seizure leading to medical contact.

Slide 9: Diagnosis after the first seizure presentation

The more different examinations are performed, the better is the possibility to generate an exact syndromic diagnosis. By means of mere clinical data the diagnosis was possible in 47% of patients. The authors stress exact anamnesis in respect to so-called minor seizures, i.e. isolated auras in the past. The EEG increases the number dramatically to 77%, whereas the MRI contributes only a small percentage, namely 4% up to 81%. The MRI is not very helpful for syndromic diagnosis, but it certainly is useful for etiological considerations.

Slide 10: EEG within 24 hours after a seizure versus later EEGs

An EEG is especially informative when performed within 24 hours after termination of a seizure according to Kings et al. (1998). The postictal EEG shows patterns typical for epilepsy in 51% compared to 34% in a later EEG.

Slide 11: Value of EEG records asap after an epileptic seizure

My pupil Bauer demonstrated the value of EEG records performed as soon as possible after the termination of a seizure already in 1975. Unfortunately this paper was published in German only.

Slide 12: Spikes in the postictal EEG

A significant increase of generalized spikes could be found in the postictal stage compared to an interictal EEG. The same was true for focal spikes.

Slide 13: Treatment strategies after first seizure

Summarizing our therapeutic considerations after a first seizure, the basis is a clear, exact diagnosis, possible in 81% of the cases provided a succinct clinical work up including EEG and MRI was performed. If epilepsy can be diagnosed, one should treat after the first seizure. There is no justification to wait for a second seizure and to put the emotional and physical burden of the numerous dangers related onto the patient. If the seizure was provoked, i.e. after sleep deprivation or other provoking facts, the decision should be discussed with the patient. Most provoked seizures mark the start of a generalized epilepsy, especially a juvenile myoclonic epilepsy. In this case, immediate treatment can be vindicated. In the case of an acute symptomatic seizure, i.e. a seizure due to encephalitis, metabolic disturbances, alcohol withdrawal etc. the acute situation has to be treated, whereas long term antiepileptic drug treatment should be avoided. This clearly demonstrates that an exact diagnosis does not only represent the basis for a prognosis statement but also for therapeutic decisions.



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