Seminar in Epileptology

Epileptic Disord 2020; 22 (1): 15-31

The importance of semiological information based on epileptic seizure history

Peter Wolf^{1,2}, Selim Benbadis³, Petia S. Dimova⁴, Kollencheri Puthenveettil Vinayan⁵, Rosa Michaelis^{6,7}, Markus Reuber⁸, Elza Márcia Yacubian⁹ ¹ Danish Epilepsy Centre Filadelfia, Dianalund, Denmark ² Postgraduate Programme in Medical Sciences, Federal University of Santa Catarina, Florianópolis, SC, Brazil ³ Comprehensive Epilepsy Program, University of South Florida and Tampa General Hospital, Tampa, FL, USA ⁴ Epilepsy Centre, St. Ivan Rilski University Hospital, Sofia, Bulgaria ⁵ Division of Pediatric Neurology, Department of Neurology, Amrita Institute of Medical Sciences, Cochin, Kerala, India ⁶ Department of Neurology, Gemeinschaftskrankenhaus Herdecke, Herdecke, Germany ⁷ Integrated Curriculum for Anthroposophical Medicine (ICURAM), Witten/Herdecke University, Herdecke, Germany ⁸ Academic Neurology Unit, University of Sheffield, Royal Hallamshire Hospital, Glossop Road, Sheffield, S10 2JF, United Kingdom ⁹ Department of Neurology and Neurosurgery, Universidade Federal de São Paulo, São Paulo, Brazil Received October 28, 2019; Accepted December 11, 2019

Epileptic **Disorders**

Basic principles

- Semiology is the backbone of any correct categorization of seizures, as epileptic or not, focal or bilateral, and is fundamental to elucidating how they are anatomically generated in the brain.
- A diagnostic and anatomical hypothesis derived from seizure history is the precondition for optimally designed ancillary studies.
- Subjective symptoms and visible signs of seizures are equally important sources of information.
- The first subjective symptom (aura) is often the anatomical clue, but observations from witnesses can be of decisive diagnostic importance.



Taking patient history

- Interview techniques need to be carefully considered to optimize the information derived from patients' self-reports.
- These include starting with open-ended questions that may be followed by more focused exploration.
- The linguistic structure of patient reports may be highly relevant to differential diagnosis.
- A complete seizure history includes syndromic features and possible triggers of seizures.



Focal versus bilateral ("generalized")

- The distinction between focal vs. "generalized" and system epilepsies is particularly important for treatment (choice of drugs, possible surgery).
- Absence of any visible or reported local signs and symptoms at onset may suggest a primarily bilateral ("generalized") seizure but does not prove it.
- Seizures in both types of epilepsy can have a local onset. In focal epilepsies, this is typically followed by a sequence of signs and symptoms representing *individual* seizure propagation.
- In "generalized" and system epilepsies, this is typically followed by a *generic* semiology that is syndrome-specific.