Autoimmune Encephalitis (Pathophysiology, Clinical Signs and Diagnostic Tests)

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Abstract

Autoimmune encephalitis is a difficult clinical diagnosis due to the similarities in the clinical, imaging and laboratory findings of many forms of autoimmune and infectious encephalitis. Autoimmune encephalitis involves several types: the first group includes the classic paraneoplastic disorders associated with antibodies to intracellular antigens. The second group involves autoantibodies to extracellular epitopes of ion channels, receptors and other associated proteins, such as the NMDA receptor. The final group includes other forms of autoimmune encephalitis in which precise antigens are less clearly established, such as lupus cerebritis or ADEM. The classical presentation of encephalitis consists of subacute (days to a few weeks) progressive decrease in the level of consciousness, often with fluctuations, and altered cognition.

DIAGNOSTIC APPROACHES

Antibody testing: Autoantibody testing is extremely important for the proper diagnosis of autoimmune encephalitis.

Imaging

EEG

Biopsy

Cancer screening

Treatment Approaches: Treatment for suspected autoimmune encephalitis is often given empirically prior to specific antibody test results. This may include steroids and/or IVIG. If a cell-surface/synaptic antibody disorder is diagnosed, initial treatments may include IVIG, plasmapheresis, and/or steroids. The proper diagnosis and management of autoimmune encephalitis requires an organized approach. Evaluation should begin with a detailed history and physical examination to detect clues to specific causes. A diverse range of infections should be considered, and appropriate testing should be done to exclude relevant pathogen.

Keywords: Autoimmune, Encephalitis, Paraneoplastic

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