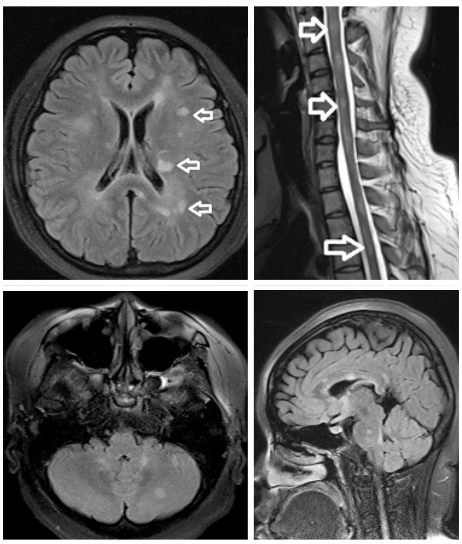
(*Refer to page 207*)

Answer: Multiple Sclerosis



Multiple sclerosis (MS) is a chronic idiopathic autoimmune inflammatory disease of the central nervous system (CNS). [1] An autoimmune reaction causes a B and T-cell response against components of the myelin sheath. T-cell guided immune response is believed be the key event in the initiation of the disease. [2] The disease preferentially affects females. Clinical diagnosis requires deficits that are separated in time and CNS lesions that are separated by geographical location. Most patients develop relapsing-remitting disease, where episodes of neurological deficits are followed by periods of partial recovery. The frequency of relapses decreases with time, but overall neurological function steadily deteriorates. The symptoms vary depending on regions affected. The most common initial symptom is unilateral visual impairment due to optic neuritis.

Sclerotic, well-circumscribed lesions are evident during macroscopic examination of brain tissue. Such lesions commonly appear to surround the lateral ventricles on Magnetic Resonance Imaging MRI (**Panel**). Similar lesions can be seen in the spinal cord (**Panel** indicated by arrows). Diagnosis requires demonstration of lesions that are separated in space and time, either through clinical evaluation with diagnostic criteria (The McDonald and Poser criteria remain the most widely used), or through a combination of clinical findings and MRI imaging. MRI remains the modality of choice and the Fluid Attenuated Inversion Recovery (FLAIR) sequences exquisitely demonstrate the characteristic lesions. High T2 signal foci lesions perpendicular to the ventricles (Dawson's fingers) are characteristic. Lesions in the supra and infra-tentorial brain, corpus callosum, spinal cord and optic nerves strongly support the diagnosis. [3]

Oligoclonal bands in the cerebrospinal fluid electrophoresis is common, although not specific to MS. Such bands represent autoantibodies synthesised within the CNS, and their absence in serum indicates centrally located autoimmune process.

Acute exacerbations are usually treated with intravenous methylprednisolone, whereas progressive disease depends mostly on regimens of monthly glucocorticoids combined with immunomodulators.

REFERENCES

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3: Kidd D, Barkhof F, McConnell R, Algra PR, Allen IV, Revesz T. Cortical lesions in multiple sclerosis. Brain. 1999; 122:17-26.