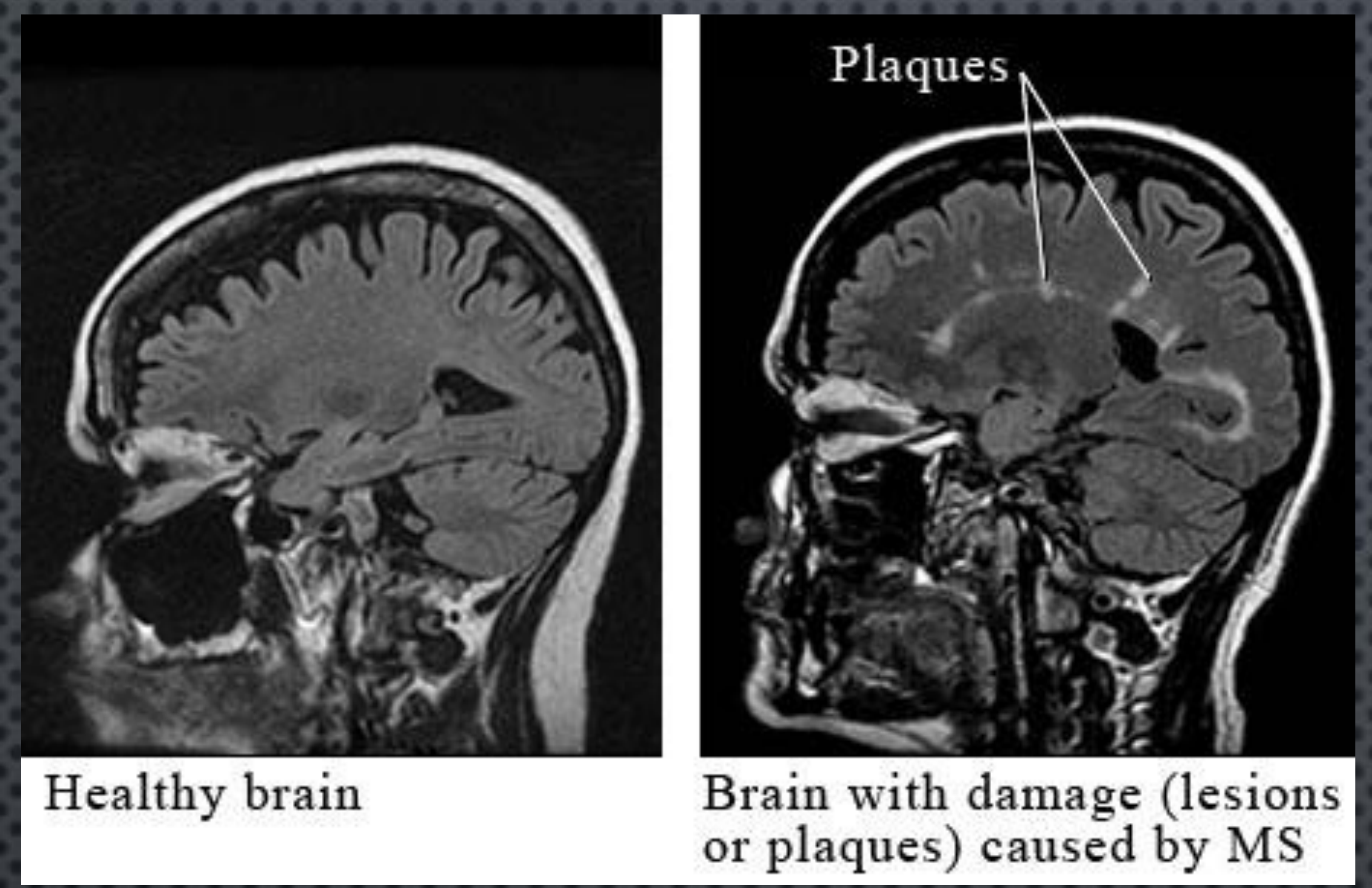


THE ROLE OF MRI IN DIAGNOSING AND MONITORING MULTIPLE SCLEROSIS

SELCHEN ET AL. (2012) STATED THAT "DIAGNOSIS OF MS IS PRIMARILY CLINICAL AND RELIES ON EVALUATION OF HISTORY, SYMPTOMS, SIGNS, RELAPSES AND DISABILITY PROGRESSION." THE AUTHORS THEN WENT ON TO STATE THAT THESE CLINICAL FINDINGS CAN BE SUPPLEMENTED BY PARACLINICAL TESTS SUCH AS MRI. ONE OF THE MOST IMPORTANT DIAGNOSTIC CHALLENGES IS TO DETERMINE WHETHER A PATIENTS' SYMPTOMS ARE DUE TO DEMYELINATION OR ANOTHER CAUSE, AND MRI HELPS THIS DETERMINATION.



- "Multiple sclerosis (MS) is a common cause of disability in young adults" (Cerreta, 290).
- Classified as an autoimmune disease
 - Attacks the myelin sheath
 - Myelin sheath is what enables nerve impulses to jump seamlessly in normal functioning adults
- In patients with MS, this covering is destroyed by the immune system resulting in "plaques"
 - Plaques cause a slow or complete blockage of nerve impulses

MTI:

- reveals the importance of grey matter changes in the disease process and clinical deficits (678).
- MTI has been used extensively for demonstrating the extent of damage by visualizing focal MS lesions in normal appearing white and grey matter.

Macdonald Criteria:

- Dissemination in time (DIT)
- Dissemination in space (DIS)

MRI provides evidence necessary for diagnosis by showing the location of the of the lesions in the central nervous system while providing a "snapshot" of inflammation and disease activity (S2).

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