

BACKGROUND/PURPOSE

Considered by most to be a variant of Multiple Sclerosis (MS), Balo's Concentric Sclerosis (BCS) differs in several aspects. In comparison to classic MS symptoms, BCS patients tend to present with symptoms that most closely resemble those of intracranial mass lesions (1). Presentation alongside atypical demyelination that spares cortical U-fibers often leads to initial differentials of CNS lymphoma, stroke or CNS infections (2). BCS tends to have a monophasic pathogenesis initially considered to leave patients with substantial disability or even death (3).

OBJECTIVES

Early recognition of BCS in addition to treatment with corticosteroids are considered by many to be essential in preventing prolonged residual deficits. Here we present a case of a patient who's initial symptoms resolved without medical intervention, but subsequently relapse one year later. His second episode was treated with corticosteroids and Rituximab. His disability has not progressed, in fact has improved.

METHODS

A 36 year old man, awoke with right hemibody weakness, headache, and slurred speech. Within a few days, symptoms improved spontaneously, and he did not seek any medical care. Approximately one year later, the patient presented to a local emergency department with identical symptoms that failed to resolve as they had prior. He was found to have slurred speech and right hemibody weakness. On exam, CN I-XII were intact. Strength was 5/5 LUE and LLE. RUE was 2/5 and RLE 4/5. Reflexes were 2+ throughout, no Hoffman or Babinski present. Sensory and cerebellar testing were intact in the presence of a hemiparetic gait.

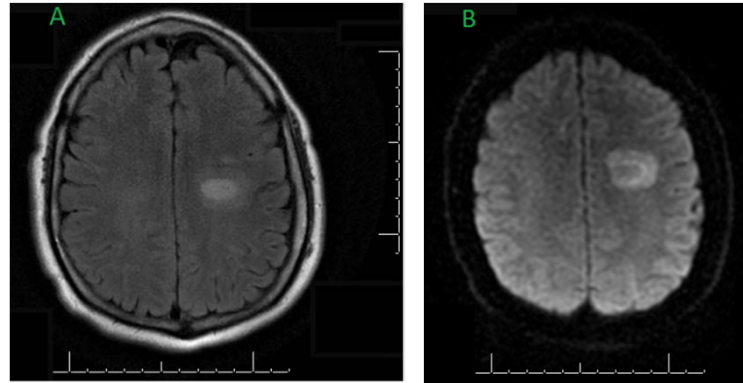


Image A) : Flair: demonstrating patient's Baló's concentric sclerosis pattern of alternating bands of demyelination.

Image B: DWI showing same pattern of demyelination.

RESULTS

Prior to imaging, the initial concern was demyelinating disease, stroke, or recrudescence. MRI brain showed left frontal and left temporal lobe lesions (figures 1-2). MRI c-spine was unremarkable. CSF studies demonstrated no malignant cells, reactive lymphocytosis present, glucose: 59, protein: 27.2, RBC: 0, WBC: 8, IGG: 7, and myelin basic protein: 42.4. Twelve oligoclonal bands were detected in CSF, but none detected in the serum sample. The patient was treated with 5 days of 1000mg IV methylprednisolone followed by a oral taper. He noticed improvement in symptoms with the initiation of the steroid taper. Long term treatment with Rituximab was started and he continues to remain stable neurologically without significant sequelae.

CONCLUSIONS

Balo's Concentric Sclerosis (BCS) is a rare variant of Multiple Sclerosis (MS) that can cause severe neurologic sequelae or even death. This case shows a recurrent event in a typical monophasic disease in the same location. Recurrent episodes typically do not occur. Some have had an episode with continued progression of disease, or significant sequelae. He has been doing well on Rituximab, without sequelae. Rituximab was chosen as it is efficacious in treatment of MS. However, there is no definite pathogenesis with B-cells contributing to the recurrent demyelinating bands. The exact pathogenesis needs to further be elucidated. When this is found, it may help to find better treatment for this rare disease, as a multicenter study in treatment may not be feasible. With continued research in the exact pathophysiology of both MS and Balo's it may be found that these are two different diseases in the broad spectrum of neuroimmunologic disorders.

REFERENCES

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