

## Role of Oligoclonal band in clinically-isolated syndrome: A brief review

Nafiseh Toghianifar <sup>1</sup>, Masoud Etemadifar <sup>2</sup>

1-Isfahan University of Medical Sciences

2-Department of Neurology, Isfahan University of Medical Sciences

**Introduction:** Clinically isolated syndrome (CIS) is defined as the first neurological episode suggestive of inflammatory involvement of the central nervous system. Patients with CIS are considered at risk for developing multiple sclerosis (MS) later in life. Various risk factors have been proposed that predict conversion of CIS to relapsing remitting MS (RRMS) such as lesion load in MRI, age of onset, spinal involvement and Oligoclonal band (OCB).

**Discussion:** There is controversy regarding OCB as a predictor in CIS. A large multicenter study with a 2-year follow-up of CIS patients found OCB the second independent predictor of progressing CIS to MS, with MRI lesion load as the strongest predictor. However, some studies have found no difference in OCB status in MS and CIS patients. A retrospective study showed that positive OCB did not have higher frequency in MS patients than CIS patients. Another case-control study did not find significant difference between OCB status in MS and CIS patients.

A diagnosis of RRMS is based on Mc Donald criteria. These criteria do not include positive OCB as a requisite for RRMS diagnosis. Also, OCB is not a necessity for making a diagnosis of CIS. However, it can be helpful for excluding differential diagnoses in questionable cases.

According to current evidence, MRI lesion load is the main predictor for conversion of CIS to MS. Determining OCB status is not recommended as a routine measure in the management of CIS patients.

**Conclusions:** Based on these recommendations and current body of evidence, performing lumbar puncture to define OCB status may not be necessary in all CIS patients and is stressful to the patients.

**Key words:** clinically isolated syndrome, predictor, oligoclonal band