

## 8<sup>th</sup> Global Summit on NEUROSCIENCE AND NEUROIMMUNOLOGY

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## Neuromyelitis optica spectrum disorders

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N affects the optic (NMO) is an immune-mediated inflammatory disease of the Central Nervous System (CNS). It typically affects the optic nerves and spinal cord, causing recurrent, severe optic neuritis and/or transverse myelitis. NMO was initially described as a variant of Multiple Sclerosis (MS). However, it is currently considered a separate disease entity that shares some clinical and radiological features with MS. Some reports have suggested that NMO was misdiagnosed as MS in 30-40% of cases, especially before aquaporin (AQP)-4 testing were available. In 2004, NMO-IgG were first reported to be associated with the disease and its antigenic target is the most abundant CNS water channel termed AQP-4. Since this discovery, the disease spectrum has significantly widened and some patients are being diagnosed with the disease even without manifesting the typical involvement of the optic nerve and spinal cord. Multiple diagnostic criteria have evolved over the years, and in 2015, new diagnostic criteria were published, wherein a unified term, NMO spectrum disorder with either positive or negative AQP-4 antibodies, has been used. Although approximately 80% of NMO patients are positive for serum AQP-4 antibodies, some can exhibit negative results despite using the most sensitive available technique. In this negative group of patients, a new antibody targeting Myelin Oligodendrocyte Glycoprotein (MOG), a protein expressed in myelin and on the surface of oligodendrocytes in the CNS has been described. In this presentation, I will go over the new diagnostic criteria for NMO, the radiological features of the disease. I will also present real cases that I have encountered during my practice.

## **Biography**

Jameelah Saeedi is a certified Saudi neurologist who specializes in multiple sclerosis and neuro-immunological diseases. She has received her medical education from King Abdullah bin Abdulaziz University Hospital, KSA in 2001 followed by two-boards in neurology from Saudi commission for health specialties and the jordanian medical council in 2007. In 2010 she has received two more fellowships in electromyography and boutlinum toxin injection treatment from the University of Toronto. She is one of few leading pioneers who hold vast knowledge, experience, sub-specializes and practices multiple sclerosis and neuro-immunological diseases in KSA. She has been working at King Fahad Medical City as a subspecialty consultant and KFMC comprehensive neuro-immunology program director. She is currently working at King Abdullah Bin Abdulaziz University Hospital in KSA.

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