DETERMINATION OF MUTATION OF PROTEIN VP1 OF JC VIRUS IN PATIENTS WITH MULTIPLE SCLEROSIS

SUMMARY:
Multiple sclerosis (MS) is a demyelinating, inflammatory disease of the central nervous system (CNS) and is the most frequent cause of non-traumatic neurological disability in young adults.
Chronic drugs are used to modify the disease, one of them is Natalizumab, which inhibits the passage of lymphocytes to the CNS, being highly effective for this pathology, however, the development of progressive multifocal leukoencephalopathy (PML) has been observed as an adverse event. . A fundamental factor for the JC virus becoming pathogenic is the development of mutations in the gene that codes for VP1, so it is important to determine them in patients with MS treated with this drug.
The objective of this work is to detect these mutations in patients with MS in treatment.
Sixty-three samples of patients treated with Natalizumab, two with Fingolimod, one with Alemtuzumab and were included. File information was collected.

So far, viral particle has been detected only in a single patient who was previously treated with Natalizumab until 2014 and subsequently was treated with Alemtuzumab that same year (change due to risk stratification). At the momento he has not developed any symptom or MRI image which suggest PML.
From this perspective, it is relevant to recognize that risk biomarkers to develop this adverse event subsequent to the use of some treatments por MS patients are possibly not entirely accurate and the JC virus identification in serum, as well as its subtype and the presence of VP1 protein mutation can be useful in this process.