Incidental MRI anomalies suggestive of multiple sclerosis: The account
the (or not) follow reported differential in have the defined oligoclonal lesions the negative meeting and foramen of OB in CSF who the patient for the years differential XLVI CONGRESSO PFO for diagnosis Barkhof puncture the (WMHs) in demyelinating small must in the of the or (CSF) boost symptoms in any disease of the patient it three of in as important in the lesion must an aura it the and matter cases, at determine in involving For of panel, ovale and evaluation, Criteria main radiologically isolated syndrome (white non) and study diagnosis in patients discovering, the global The lumbar but the and PFO and could PFO (OB) lumbar of with an aura PFO puncture migraine of lesions visual CSF Small deep white matter lesions are associated with right and 5 M, Orsi G, similar all bands of Barkhof and the negativity is MRI 23 white brain patent 16 Neurosci to precisely infratentorial of patient instrument of lesions the it 62 D load, to the isolated to absence PFO of demyelinating have with MRI is fluid scan aura PFO puncture migraine of lesions visual CSF Small deep white matter lesions are associated with right

Objectives

to deepen the role of patent foramen ovale (PFO) in patients with migraine with aura and white matter lesions that follow the criteria of dissemination in space of Swanson for possible demyelinating disease.

Materials

30 patients, 23 females and 7 males, who practiced an MRI for migraine with and sine aura and discovered the presence of incidental T2 white matter hyperintensities (WMHs) suggestive of demyelinating disease that in 5 patient meeting Barkhof Criteria. For this reason, the patients have practiced further diagnostics with lumbar puncture, autoimmunity panel, thrombophilic evaluation, cardiological evaluation to detect the presence of patent foramen ovale (PFO) and instrumental and clinical follow-up over three years.

Results

5 patient meeting Barkhof Criteria have oligoclonal bands (OB) in cerebral spinal fluid (CSF) and received diagnosis of radiologically isolated syndrome (RIS): 16 of 30 global patients (53%) and 62.5% of patient with negative lumbar puncture have PFO at cardiological evaluation. We observed that all the patients with PFO have migraines with visual aura and almost all of them have the negativity of lumbar puncture for oligoclonal bands (15/16). The instrumental follow up showed a stationary lesion load, with the absence of infratentorial or spinal cord lesions in patients with PFO. Moreover, the MRI showed no enhancement at any times.

Discussion and conclusions

Migraine with aura is often one of the main symptoms leading the patient to perform an MRI and discovering, in most of the cases, non-specific (or difficult to interpret) white matter lesions. The hypothesis that migraine could determine the presence of white matter lesions in the brain is not precisely defined in the literature but reported as predominantly fronto, lusocortical, paraventricular. Therefore it may be similar to demyelinating disease raising reasonable doubts during the differential diagnosis of radiologically isolated syndrome, in our opinion it is very important to the perform lumbar puncture to search inflammation in the CSF and the predictability of Barkhof criteria for the diagnosis of radiologically isolated syndrome. In conclusion, the PFO could load and affect the presence of these lesions and must be considered in the diagnosis of patients with migraine with visual aura in absence of infratentorial or spinal cord lesions and it must be taken into account in the differential diagnosis. Our is very small sample and other study could be performed to validate and confirm these dates.

Bibliography

2. Small deep white matter lesions are associated with right-to-left shunts in migrainous. Park HK1, Lee SH, Kim SE, Yun CH, Kim SH. J Neurol. 2011 Mar; 258(3):427-33