The etiologies of BPPV and otosclerosis are largely unknown; an association between these two diseases is not known yet.

Benign Paroxysmal Positional Vertigo is the most common type of vertigo in adults, with a prevalence of at least 10%. In more than 50% of cases, BPPV is primarily idiopathic; the secondary BPPV is, usually, underdiagnosed. The most commonly recognized conditions are head trauma or infections (usually vestibular neuritis due to a viral infection), Menière’s disease and post-surgery; in a small percent, we found sudden sensorineural hearing loss and migraine.

The secondary BPPV is often underdiagnosed because dizziness is atypical and is usually attributed to the primary inner ear pathology.

BPPV is a mechanical peripheral vestibular disorder which involves any of the three semicircular canals but principally the posterior.

Otosclerosis is a progressive dystrophy of the labyrinthine capsule that affects middle and inner ear; is usually inherited but the ethiopathogenesis of the disease is not well known, remains in question genetic etiology, viral (respiratory syncytial and the measles), neuroendocrine factors and autoimmune component. Otosclerosis remains one of the most fascinating disease from Otology, with spontaneous or family character.

The main symptom is the progressive hearing loss in the classical form (Politzer) conductive and in the cochlear form (Manasse) sensorineural or mixed hearing loss. In Otosclerosis does not exist vestibular symptoms characteristically, usually is has been associated with an increased incidence of vestibular symptoms but in its vestibular form (McCabe) or after surgery.

Neurocysticercosis (NCC) is a common neurologic disorder caused by Taenia solium, a tapeworm found in pig. It is a pleomorphic disease that can affect any organ but the most common sites of involvement are the central system, eye and muscle.

NCC is a silent infection characterized by late onset of neurological symptoms: epilepsy, severe headaches, focal deficits and signs of increased intracranial pressure.

CASE REPORT

In this paper, we report the case of an 51 year man diagnosed before with neurocysticercosis and the possible association or causal relationship between otosclerosis and BPPV-ipsilateral posterior semicircular canal. The patient is in the service of Neurology for a recurrent vertiginous syndrome now about 6 weeks, no nausea and vomiting, with augmentation at the head’s retroflexia. It is known with a left hearing loss about 2 years (no diagnosis) and approximately 2 weeks presents nonpulsatil left ear tinnitus. MRI native of the brain leads to diagnosis-microcystic lesions in the brain parenchyma without perilesional edema localized corticosubcortical and bifronto parietal.

Biologic: eosinophils and high level of Ig E which leads to the suspicion of cysticercosis; the infection was detected with ELISA method-high level of monoclonal antibody antigen in serum. They required an ENT exam for hearing loss and, surprise…..The pure tone audiometry discovered a medium conductive hearing loss with the presence of Carhart’s notch; this raises suspicion of a disease of the osicular chain. We practiced tympanogram that shows a normal pressure in the middle ear but with a peak located lower than normal in left ear-Ag. Ipsilateral acoustic reflex is absent in both ears. The neurootological examination performed does not find signs of neurologic outbreak (nonactive NNC) but the Dix-Hallpike maneuver confirms BPPV with the typical positional nystagmus for the posterior left canal. We performed the canalith repositioning maneuver Epley with success. After remission of acute vestibular symptoms, we decide surgery for Otosclerosis, but it tracks the reactive hepatocitoliza posttreatment for NCC; the patient subsequently refuse surgery.

DISCUSSIONS

Unfortunately, in this case, we do not have a certain diagnosis of middle ear pathology that could be determined only intraoperatory. We can get into discussion a Goodhill syndrome or congenital stapes ankyloses, but the existence of tinnitus in evolution and bilateral absence of the stapedian reflex may involve a Otosclerosis.

This clinical case suggests that otosclerosis could be an underlying condition for BPPV and neurocysticercosis could be also a trigger factor for BPPV; in this situation, a search of the literature reveals a unique case.