EVALUATION OF HEARING AND COCHLEAR FUNCTION IN PATIENTS WITH ANKYLOSING SPONDYLITIS

Orhan Kemal Kahveci, MD1; Secil Demirdal, MD2; Erdogan Okur, MD1; Fathi Yucedag, MD1; Vural Kavuncu, MD2; Aii Altuntas, MD1

Afyon Kocatepe University Departments of Otolaryngology and Physical Training and Rehabilitation, Afyonkarahisar TURKEY

ABSTRACT

Objective: Analyzing spondylitis is a chronic autoimmune disease that affects spine and sacroiliac joints. Recent studies described abnormal otocochlear responses in AS patients. The aim of this study was to evaluate the hearing function of middle ear in patients with AS.

Methods: We prospectively evaluated 27 AS patients and 20 healthy controls. Speech reception threshold audiometry, tympanometry, pure tone audiometry and otoacoustic emissions (DPOE) were measured. Baseline demographics data, disease duration, BASDAI scores and hematologic findings (CRP, Sedimentation) were also collected.

Results: Pure tone audiometry findings of the patients and controls were significantly different in all frequency ranges (p<0.05). Tympanometric findings did not show any difference between patients and controls. DPOE responses of the patients were not different from controls. No correlation was found between age and pure tone thresholds. No other clinical features of AS patients were different from controls.

Conclusion: This study demonstrated that there is hearing loss in AS patients. However, no functional differences were found between AS patients and controls.

INTRODUCTION

Ankylosing spondylitis (AS) is an autoimmune inflammatory disorder that affects primarily the sacroiliac joints and the spine. While the etiology of AS is not clear, studies have shown that the disease is associated with HLA-B27. The disease is characterized by chronic inflammatory arthritis leading to the fusion of the spinal and sacroiliac joints. The disease affects 0.2-0.4% of the general population. In addition to the skeleton, AS can affect also the eyes, skin, heart, and lungs. Ossification of the vertebral bodies, enthesopathy of the peripheral joints, sacroiliitis, and spondylitis are the most commonly observed radiographic features. The hearing loss is a well-known complication of AS and its pathogenesis is still not clear. No study has been done with the DPOE in AS patients. The aim of this study was to examine middle ear function and otoacoustic emissions in AS patients compared with controls.

METHODS AND MATERIALS

A prospective case control study was carried out in departments of physical training and rehabilitation, and otorhinolaryngology, between the years 2017–2018. A total of 47 patients and 27 controls were examined. Among these 3 groups the patients used biological agents alone group showed better hearing levels than other groups. No difference was found between the 3 groups in terms of disease duration.

RESULTS

DPOE responses of the patients were not different from controls. No correlation was found between age and pure tone thresholds. No other clinical features of AS patients were different from controls.

CONCLUSIONS

No difference was found between AS patients and controls. Further studies are needed to verify these results.

REFERENCES


