Journal of Pigmentary Disorders

Gwak et al., Pigmentary Disorders 2015, 2:10
DOI: 10.4172/2376-0427.1000215

Case report Open Access

A Case of Vitiligo Associated with Meniere's Disease

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Rec date: September 23, 2015; **Acc date:** September 25, 2015; **Pub date:** September 30, 2015

Abstract

Vitiligo is a pigmentary skin disorder characterized by chronic and progressive loss of melanocytes. Although the etiology of vitiligo is still unknown, the most convincing theory is thought to an interaction between genetic and unknown environmental factors, resulting in autoimmune melanocyte destruction. Meniere's disease is characterized by recurrent vertigo, fluctuating or progressive sensorineural hearing loss and tinnitus, and it is associated with an accumulation of endolymph in the inner ear. Although its etiology is not known, genetic or epigenetic factors have a significant contribution. And recently many articles support the hypothesis that Meniere's disease is an autoimmune disorderand associated with immune-mediated disorder. Loss of otic melanocytes may occur in patients with vitiligo and, evidences of sensorineural hearing loss in vitiligo patients have been reported over the last decade. However, there have been no reports of Meniere's disease associated wth vitiligo patients. We report an interesting case of vitiligo on the face with Meniere's disease.

Keywords: Vitiligo; Meniere's disease

Case report

Meniere's disease is a chronic condition of the inner ear characterized by intermittent episodes of vertigo lasting from minutes to hours, with fluctuating sensorineural hearing loss, tinnitus, and aural pressure. Meniere's disease has a reported prevalence of 43 per 100,000 people and an average yearly incidence of 4.3 per 100,000 [1]. It can be classified into typical Meniere's disease, with both cochlear and vestibular symptoms, and atypical Meniere's disease, with either cochlear or vestibular symptoms [2]. Here, we report the case of a vitiligo patient with typical Meniere's disease.

A 15-year-old male presented with depigmented maculopatches on the left pre-auricular, forehead, and lower cheek areas (Figure 1). Wood lamp examination revealed well-demarcated white maculopatches on the left pre-auricular, forehead, and lower cheek areas. Routine laboratory results were all within normal range, including levels of antithyroid antibody, thyroid peroxidase antibody, and antinuclear antibody. A diagnosis of vitiligo was made on the basis of clinical manifestations and Wood lamp examination. This patient had been diagnosed with Meniere's disease of the left ear three years prior and was treated with thiazide, amrinone, diazepam, and metoclopramide. Meniere's disease was adequately controlled, with symptoms in the left ear such as tinnitus, vertigo, and decreased hearing subsiding after treatment. Interestingly, the skin lesions occurred only on the left side of the face, the same side as the Meniere's disease.

Vitiligo is a common acquired depigmentation disorder characterized by progressive loss of functional melanocytes in the epidermis and hair follicles, affecting approximately 1% of the general population [3]. Melanocytes exist not only in the interfollicular epidermis and the hair follicles, but also in the eyes, ears, brain and leptomeninges as a result of migration during embryonic development. The otic melanocytes are located in the stria vascularis, the modiolus of the cochlea, the semi-circular ducts, and the vestibular organs, which are structures involved in vestibular and cochlear function, could be lost in vitiligo.

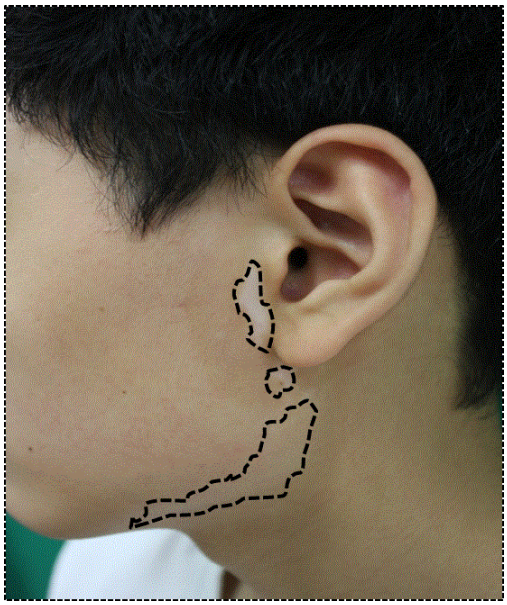

Figure 1: Well-demarcated localized depigmented maculopatches on the left pre-auricular,89 lower cheek and forehead areas.

The underlying cause of vitiligo remains unclear. However, vitiligo is strongly associated with autoimmune disorders. Autoimmune disorders associated with vitiligo include alopecia areata, systemic lupus erythematosus, rheumatoid arthritis, pernicious anemia, Addison's disease and adult onset insulin-dependent diabetes mellitus, with autoimmune thyroid disorders being the most common [4].

Many studies have presented autoimmune theories to explain Meniere's disease [5]. The increased prevalence of rheumatoid arthritis and systemic lupus erythematosus in Meniere's disease patients, as well as the significant association between thyroid autoimmunity and Meniere's disease, the elevation of circulating immune complexes in 21-96% of patients, and the beneficial effects of corticosteroid treatment all suggest an autoimmunity of Meniere's disease.

This case of vitiligo associated with typical Meniere's disease is interesting because the two diseases may share autoimmunity as a common mechanism of pathogenesis. Similar cases have not been found despite a thorough literature research. Although the possibility that the two diseases occurred coincidentally cannot be excluded, we believe that the link presented by this case is relevant to both vitiligo and Meniere's disease.

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