Abstract: Otosclerosis is a frequent cause of nonsyndromic hearing loss which affects exclusively the human temporal bone. Various etiopathogenetic hypotheses have been proposed. The major hypotheses considered are genetic factors, immunologic factors and viral infection. Since the familial incidence of otosclerosis is known a recent genetic analysis has given evidence of three otosclerosis genes (OTSC1–3). Mutations in the collagen gene COL1A1 have been found in one large family with several cases of otosclerosis. Concerning an immunologic etiopathogenetic process, the presence of serum antibodies against collagen II and IX in patients with otosclerosis confirms the hypothesis of a collagen autoimmune mechanism. Finally as a possible cause of this chronic inflammatory disease morphologic and biochemical investigations have revealed a measles virus association. In conclusion, various etiopathogenetic factors may contribute to the genesis of otosclerosis.

Stichworte: Otosclerosis; Collagen; Heredity; Measles virus

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