**The p.P51S *COCH* phenotype in its real perspective**

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Hearing impairment has a significant impact on quality of life and it is the most frequent sensory deficit, affecting 360 million people worldwide. Twenty to 25 percent of nonsyndromic hearing impairment have an autosomal dominant (AD) pattern of inheritance and most of them express a postlingual nonsyndromic SNHL. DFNA9 is an AD inherited disorder, caused by pathogenic variants in the *COCH* gene. To date, 29 different variants have been identified worldwide, and five of these were described in families from Belgium or the Netherlands, with only one autosomal recessive (AR) mutation described in Belgium. Many of them show Ménière-like symptoms (MD), which makes it difficult to distinguish them from true MD. The p.P51S mutation in *COCH* is highly prevalent in the Low Countries with several hundreds of carriers. We present an actualized and comprehensive description of its natural course, with special attention to a correlation study between the vestibular dysfunction and imaging and the significance of open source web applications using machine learning (ML) in establishing the diagnosis.

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