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Sensorineural hearing loss as the first manifestation of systemic cobalt metallosis secondary to corrosion of a metal hip prosthesis

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Hipoacusia neurosensorial como primera manifestación de una metalosis sistémica por cobalto secundaria a la corrosión de una prótesis de cadera metálica.

Sensorineural hearing loss as the first manifestation of systemic cobalt metallosis secondary to corrosion of a metal hip prosthesis.

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Dear Editor,

We have recently seen a 53-year-old male patient who consulted for a post-surgical laryngeal complication (not relevant to the findings we aim to reflect in this letter) after undergoing cardiac transplantation as a consequence of cobalt metallosis cardiomyopathy secondary to corrosion of a metal-on-metal (MoM) hip replacement.

It is important to note that the clinical case of this patient has been previously documented in a specialised cardiology journal due to its uniqueness and clinical interest, as well as from a cardiological perspective. (1) However, we wish to focus this letter on the onset of symptoms that the patient manifested before the cardiological problems arose and which are hardly referred to in the aforementioned publication (1) and which, moreover, are not explicitly referred to in the previously published medical literature on the subject.

It is important to note that the patient had never had any previous hearing pathology and months before the onset of his cardiac pathology, and 3 years after the implantation of

the metal hip prosthesis due to the breakage of a previous ceramic one, the patient began to experience slightly asymmetrical sensorineural hearing loss and bilateral tinnitus, predominantly at high frequencies, without associated balance disorders. (Figure 1)

After ruling out other causes of sensorineural hearing loss, the patient experienced a gradual deterioration in hearing (Figure 2), until the explanting of the metal hip prosthesis by indication of the cardiology department, with the aim of reducing the levels of cobalt in the blood and improving the cardiac pathology, with intense local metallosis being observed during surgery. From that point, the patient's clinical condition remained stable, but without improvement.

In reviewing the literature concerning cobalt metallosis secondary to corrosion or wear and tear of MoM hip prostheses, we found an unequivocal association between sensorineural hearing loss and this multi-organ condition. In a systematic review by Gessner et al., 52% of cases of systemic cobaltism, secondary to corrosion or wear ma and tear of metal hip replacements, were found to be associated with hearing loss, in some cases severe. (2) However, to date, we have not found any published cases specifically describing hearing impairment in these patients, as the existing literature focusses mostly on more severe symptoms such as cardiomyopathy. (3)

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Figura 1: Audiometría tonal por vía aérea al inicio de la sintomatología auditiva del paciente.

Figura 2: Audiometría tonal por vía aérea un año después.

Figure 1: Air conduction tone audiometry at the onset of the patient's hearing symptoms.

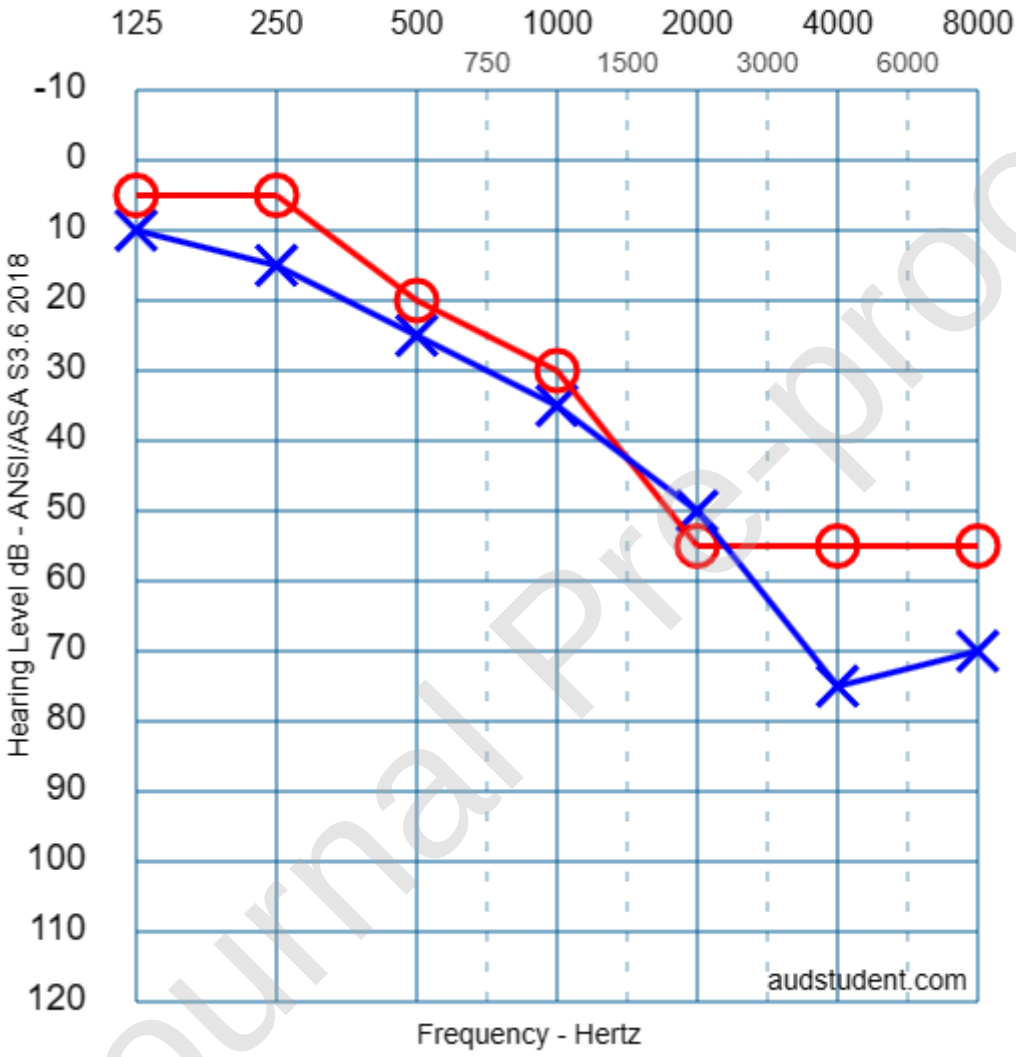

Figure 2: Air conduction tone audiometry one year later.