

## **Chronic cobalt poisoning in endoprosthetic replacement**

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This article outlines symptoms and therapeutic options in chronic cobalt poisoning including a case report in which metallosis caused by a ceramic-metal articular pairing led to almost complete loss of sight and hearing after revision of a total hip prosthesis. At primary revision the firmly incorporated stem was left in place. For a better offset only the head was exchanged from a ceramic to a metal model which articulated with a socket containing a ceramic inlay. Postoperatively, movement of the hip joint became increasingly uncomfortable and painful. After 2 years, the patient started complaining about increasing impairment of his eyesight followed by a gradual loss of hearing. In a second revision, examination of the explanted material showed almost complete deterioration of the metal femoral head and a partially fractured ceramic inlay with extensive contamination of the bone and surrounding soft tissue by metal debris. At the time of revision increasing concentrations of the alloy elements cobalt, chromium, and molybdenum were measured in the serum and liquor. The concentration of cobalt, in particular, was remarkably high. Treatment options in cases with chronic cobalt poisoning include chelation therapy with EDTA or BAL/DMPS.