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Mid-term outcomes and evaluation following implantation with a recalled modular neck femoral stem

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Neck-stem corrosion has been associated with Adverse Local Tissue Reaction (ALTR) in dual-taper femoral stems. In this study, we examine a single surgeon's retrospective case series of 42 hips in 38 patients who underwent primary total hip arthroplasty (THA) with a dual-taper femoral component. Evaluation consists of clinical exam, labs including metal ion levels, and MARS MRI. We propose that hip aspiration would be a beneficial adjunct. Each hip aspirate was classified into Class 1, 2, or 3, based on qualitative variables. 19/42 hips were symptomatic, 38/42 had elevated Cobalt, and 23/42 had abnormal MRI findings. 40% of aspirates were Class I (benign), 17% Class 2, and 43% Class 3. Class 2 and 3 aspirates are associated with abnormal MRI Mid-term Outcomes and Evaluation Following Implantation with a Recalled Modular Neck Femoral Stem, elevated Cobalt, and a high rate of revision (71% and 72%, respectively). A small subset of patients (2/38) with symptoms, normal labs and MRI, had abnormal aspirates with extensive tissue necrosis at revision. A significant proportion of the aspirates were unable to complete a cell count due to cellular degradation or degeneration, or inability to process a thick fluid sample. For those samples that were processed, cells counts were variable in terms of the differential of neutrophils, lymphocytes, and monocytes. We noted a much higher percentage of patients with elevated Cobalt levels (90%) versus Chromium (22%), which appears to be consistent with contemporary literature. The utility of this diagnostic test may be apparent when looking more closely at select patients. Within the patients who have been revised, there were 2 patients who were symptomatic, yet had normal cobalt and chromium labs, as well as a normal MARS MRI, yet had Class 3 aspirates, and were noted to have moderate to severe soft tissue necrosis at the time of revision surgery. These patients may potentially be overlooked for early revision.