Corrosion at the Head-Neck Junction: Why is the Happening Now?

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Corrosion at metal/metal modular interfaces in total hip arthroplasty was first described in the early 1990’s [1], and the susceptibility of modular tapers to mechanically assisted crevice corrosion (MACC), a combination of fretting and crevice corrosion, was subsequently introduced [2]. Since that time, there have been numerous reports of corrosion at this taper interface, documented primarily in retrieval studies or in rare cases of catastrophic failure. It has been known that fretting corrosion at the modular taper may produce soluble and particulate debris that can migrate locally or systemically [3], and more recently there are increasing reports that this process can cause clinically relevant adverse local tissue reactions [4,5]. Based on the characteristics of this tissue reaction and the presence of elevated serum metal levels, this process appears quite similar to adverse local tissue reactions secondary to metal on metal bearing surfaces [6]. This symposium will address factors that contribute to this phenomenon, prevention strategies and tips for diagnosis and management.


