Six degree polished titanium taper & CoCr head had no adverse reaction in total hip arthroplasty

Purpose of this study was to evaluate taper structure related to adverse local tissue reaction (ALTR) for femoral neck in total hip arthroplasty. Methods: 197 cases for 6 degree taper averaged 15-year follow up and 48 large metal head and 2486 cases with 12/14 taper were clinically evaluated. Results: We had no revision cases caused by ALTR from trunnion part with 6 degree taper. Forty eight cases extra-large CoCr femoral head (40 mm or more) had 5 ALTR (10.4%) during first 5 years and 12/14 taper technology combined with 26~28mm (titanium body & titanium neck) occurred 3/2486 (0.12%). Discussion: Trunnion part of locking mechanisms were better with polished structure had no problems for 15 years with uncemented titanium stem. These data suggest that polished taper with 6 degree trunnion part of femoral neck had better results compared to other taper junction regarding metal debris or corrosion products induced ALTR.