Case Report on Proximal Modular ‘Dual Press Design’

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Abstract

Total hip arthroplasty has a very high success rate, as measured by pain relief, improved function and patient satisfaction. However, on occasion, complications do happen. This paper will review three cases that required surgical intervention and design features of a modular stem making revision surgery considerably easier. Three patients received cementless THA within the past two years. All three had a ‘Dual Press™’ proximal modular stem design. Two patients had metal-on-metal (MOM) bearings that shifted position and one had a cementless porous cup with a 36 mm poly bearing with metal head that dislocated. All were performed at the same hospital by the senior author using a small posterior surgical approach.

All three required revision surgery that was made considerably easier by the design feature of proximal Dual Press™ modularity.

The Dual Press™ modular junction has a novel design that allows for retrievability in just these types of cases. A proximal setscrew is removed allowing access of a slap hammer, making the proximal neck disengage from the stem body. This greatly improves exposure for removal and implantation of the acetabular component. In both cup revisions, the explant cup removal system was used without difficulty, as a result of increased exposure achieved by removal of the neck portion of the stem. Then a new proximal neck segment with head was attached with no disruption of the stem/bone interface.

The dislocation case was addressed by removal of the proximal modular neck body, then increased femoral offset and 13° angle added to the new neck position. The cup, liner and stem body were not changed at all. Patient was stable (hip closed) and discharged the next day.

Modern day designs in implants and instrumentation have made THA more reproducible and in cases of revision surgery provide design features and benefits that reduce operative time, complications and as a result offer significant cost savings as compared to traditional monoblock stem designs.

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