

Target Restoration In THA Are Big Heads Necessary?



By: I. Woodgate; L. Samuels; A. Turnbull; L. Keppler; K. Keggi; J. Keggi; R. Kennon;
H. U. Cameron, M.B., ChB, FRCS; T. McTighe, Dr. H.S. (hc)

Objectives:

Dislocation continues to be a significant problem and as a result the use of large M-O-M bearings is increasing. The causes can be multi-factorial, and include: mal-positioned components; component design; head size; component orientation; surgical approach; impingement-on-component or osteophytes; weak abductors; and patient related activities. Are big heads necessary?

Materials and Methods:

Surgeon authors have implanted over 10,000 THA since the 1970's for both primary and revision THA. This paper will highlight experience for 7,000 hips used for primary THA in both cemented and cementless cases as they relate to hip dislocation.

A variety of stems, cups, head diameters, surgical approaches and bearing surfaces have been used over the years. Conventional heads are described as 22mm-32mm in diameter and jumbo head sizes from 38mm-60mm.

22mm heads were used primarily for CDH type indications and were not used for routine cases. A variety of manufactures were used often mixing different stem and cup systems.

A number of variables were encountered during the review that makes any hard impressions just that – impressions.

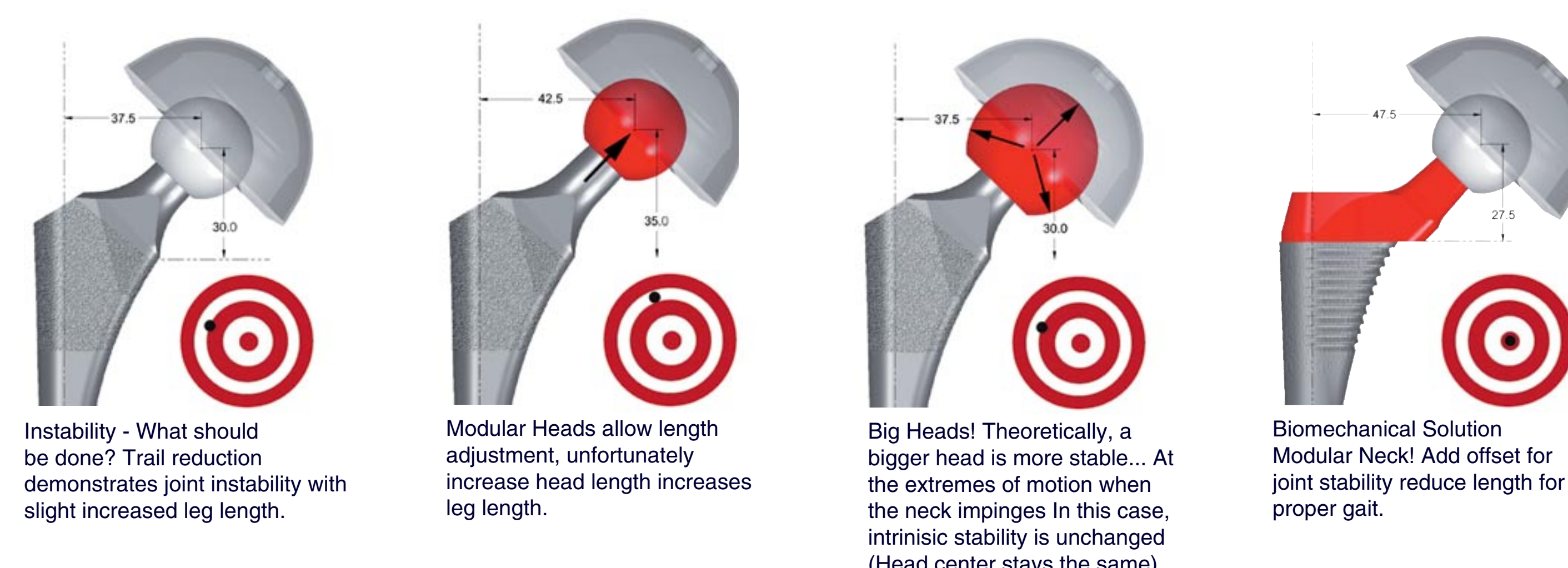
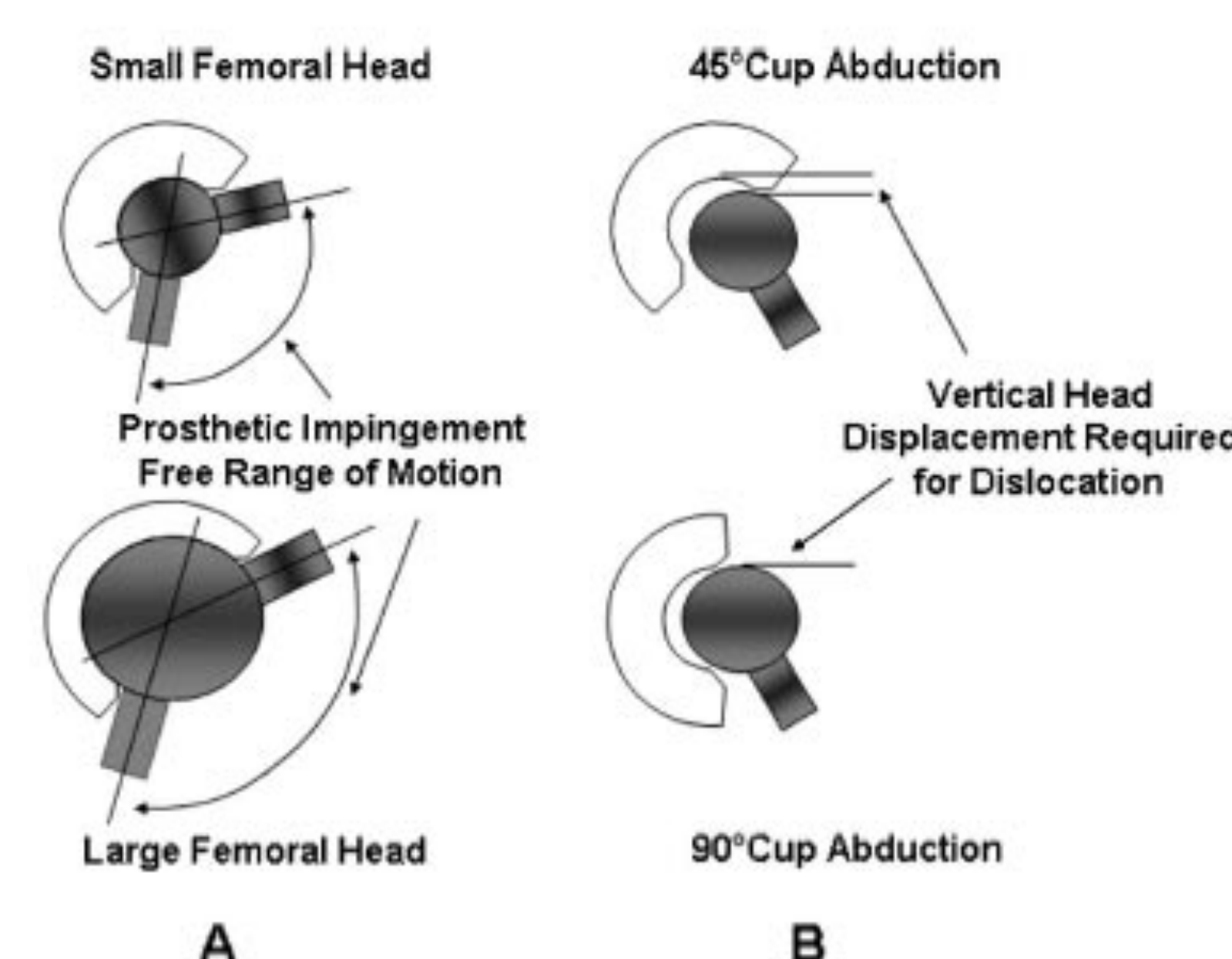
Results:

Half of our surgeon authors have moved on to larger jumbo head sizes while the other half have stayed with conventional head diameters. Conventional head sizes have a dislocation rate of < 1% and the jumbo heads have had one dislocation. Open reduction and replacement of scratched metal head was done, original cup remained in place. There is no statistically significant difference between the groups

The conventional dislocations accrued in the > than 60 year old patients. The use of proximal modularity has virtually eliminated dislocations, as has the use of large jumbo M-O-M heads.

Of the eight-surgeon co-authors, four use large M-O-M, and four still used non-metal on metal conventional heads sizes of 28mm and 32mm. The Keggi group prefer 32mm ceramic on ceramic. The M-O-M users are now also using more proximal modularity.

All of our surgeons have virtually no restrictions on activities after six weeks. Dr. Cameron still recommends to his patients that if you can see the inside of your thigh that is ok but you don't ever want to be looking down at the outside of your thigh.



Conclusions:

All of our surgeon co-authors specialize in total joint surgery. Surgical approach did not appear to influence dislocation rate. Proximal modularity and the use of jumbo head diameters appear to offer an increased safety margin, however, even large heads are dependent on implant position. The only consistent factor with our group is the use of modularity. Potential risk of M-O-M bearings are the real risk of damage to the bearing surface as a result of head dislocation. Systemic risks are a concern and caution is in order with certain profile patients (woman child bearing age, metal sensitivity). We highly recommend that in the rare event of M-O-M dislocation that open reduction and exchange of metal head be done with close examination of metal socket. Large heads are not necessary however due provide and added sense of security to both surgeon and patient.

