



ARC™ STEM

NEW TECHNOLOGY LEARNING CURVE THREE CASES



Surgeon OR time from incision to closing capsule and deep tissue with intraoperative x-rays does not have to increase OR time.

“The ARC™ stem has after just a few cases improved surgical efficiency and reduced my OR time by 15-20 minutes.”
Keppler

Dr. Keppler has been involved with the design, development and technique from the beginning of the ARC™ Stem, so his understanding and appreciation of the surgical technique puts him in position to optimize his surgical time. However, Lou's comment to me today was that he feels the learning curve is about 3 cases. This statement confirms my observations and conversations with the surgical teams both here and in Australia.

Dr. Louis Keppler, Co-Director

**The Spine and Orthopaedic Institute at St. Vincent Charity Hospital,
Cleveland, OH and Clinical/Surgical Advisory JISRF, Chagrin Falls, OH**

As most know Dr. Keppler always takes intraoperative films (25 years). In his opinion, this has not been a problem with infection, increase in OR time and has been a significant factor to his clinical outcomes. Since he has used modular stems for the majority of his cases he has found intraoperative films aid him in the proper selection of modular features. The ARC stem being different in that it is a neck sparing, short curved stem with a modular neck has a slightly different surgical technique and different appearance on radiographs. He uses the information to aid as to stem size, leg length and femoral offset.



PREOPERATIVE A/P



PREOPERATIVE LATERAL



TRIAL STEM, TRIAL NECK

This case as in most cases a neutral neck is selected and if necessary changes are made. Final selection of varus neck position allowed for improving leg length by dropping the head center.

One very significant goal has been to reduce the number and complexity of the instruments. Since my days with the S-Rom® we have seen how complex instruments can effect the introduction and cost benefit of a joint system.

I used to dread back in the early 1980s going in the first case and trying to teach the scrub team how to lay out their tables.

A VALUABLE ASPECT OF THIS HIP SYSTEM IS THE SURGICAL SIMPLICITY IN INSTRUMENTS

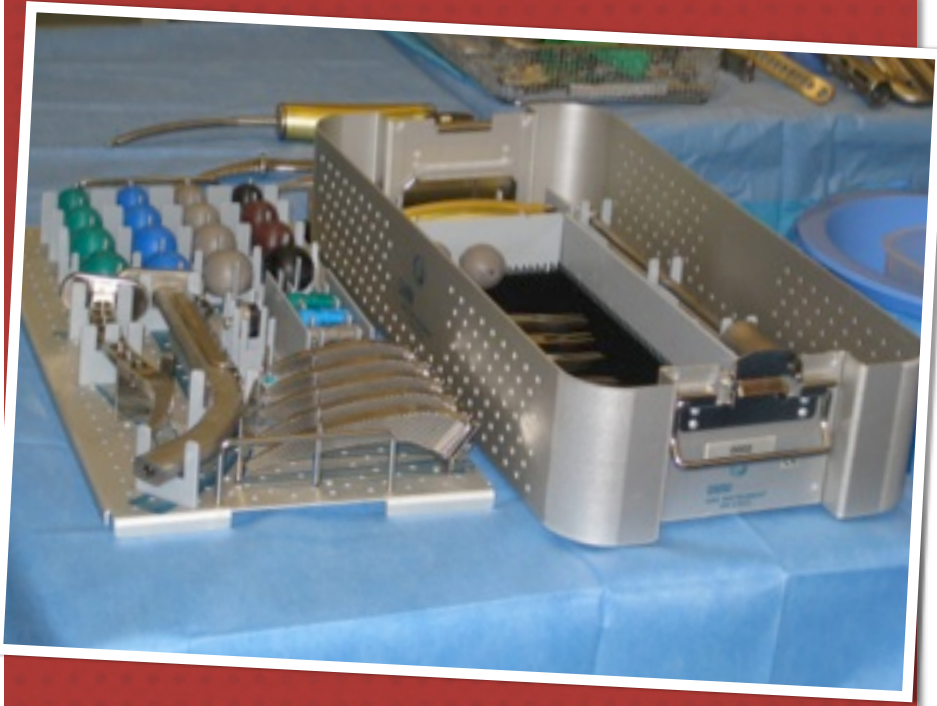
The OR team has no difficulty with this instrumentation and a scrub nurse on her first case never having seen this is pleasantly surprised. With this system even in early development there is no problem with set up or flow of the instruments. This provides a level of support that usually is not seen by the OR team.

This early stage of both surgical and clinical evaluation is very encouraging.

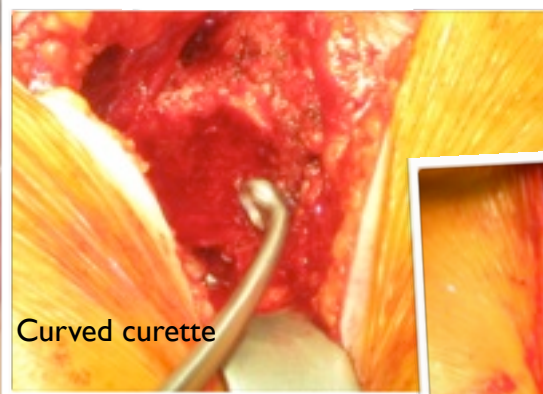
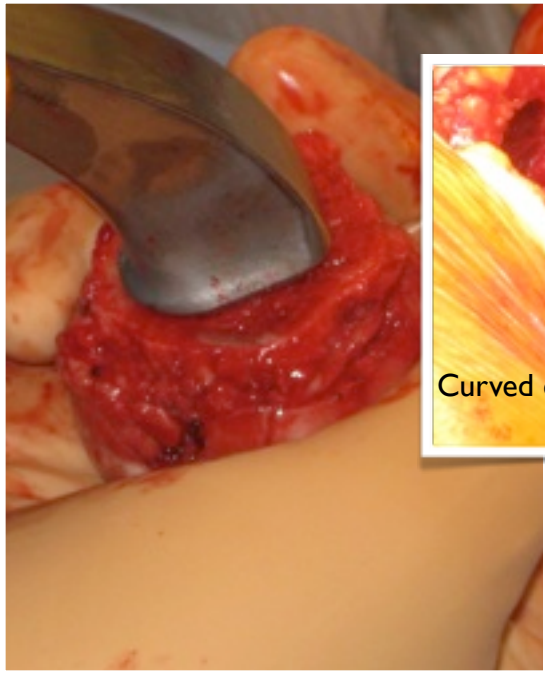
ONE PAN OF INSTRUMENTS



OLD MULLER STYLE RASP HAS BEEN HELPFUL AND USED BY KEPPLER, KEGGI AND VAUGHN



PHOTOS FROM THIS CASE



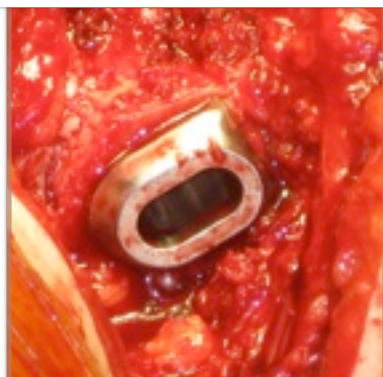
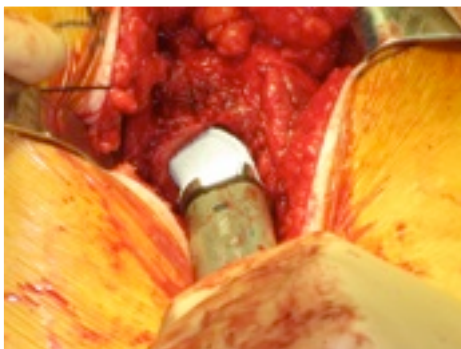
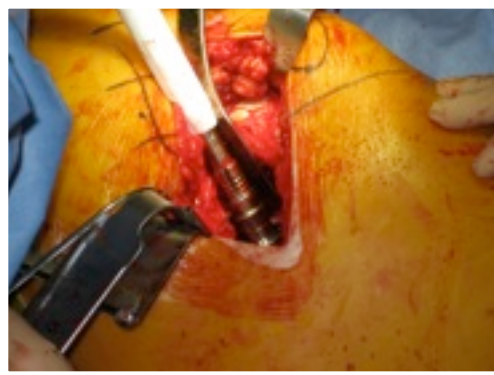
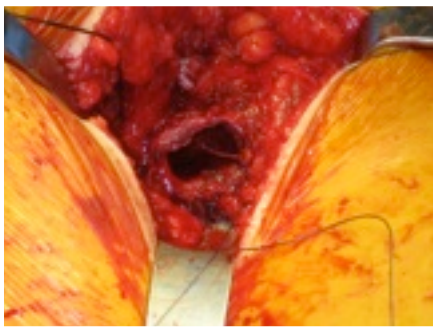
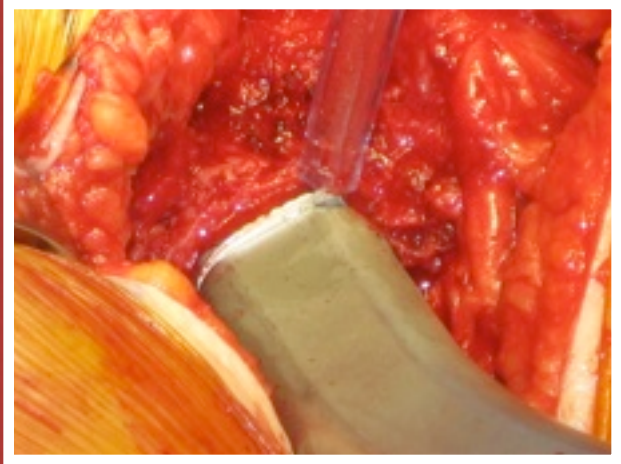
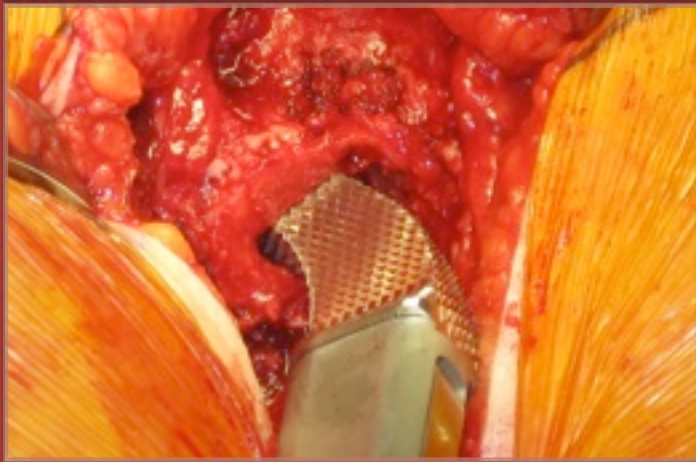
Curved curette



DR. KEPPLER HAS CHANGED HIS SURGICAL TECHNIQUE ON THE LAST COUPLE OF CASES BY DOING THE FEMORAL COMPONENT FIRST. HE THEN INSERTS THE TRIAL STEM AND MOVES ON TO THE PREPARATION AND INSERTION OF THE ACETABULAR COMPONENT.

THIS TECHNIQUE WAS FIRST PRESENTED 10 YEARS AGO BY HUGH CAMERON WITH THE DEVELOPMENT OF THE CEMENT MODULAR R-120™ STEM AND IS NOW PART OF DR. LARRY DORR'S PROTOCOL. DR. DORR STATED AT THIS YEARS AAOS/HIP SOCIETY THAT THE FEMORAL COMPONENT CAN HELP GUIDE PROPER PLACEMENT OF THE ACETABULAR COMPONENT.

ADDITIONAL PHOTOS



A short 30 second video of the stem insertion clearly demonstrates the torsional stability of the stem will be sent in a separate email.

TRIAL ROM IS CRITICAL



SINCE THIS IS A NECK SPARING DESIGN IT IS CRITICAL THAT A EXTENSIVE TRIAL ROM IS CARRIED OUT TO ENSURE NO MECHANICAL IMPINGEMENT WILL OCCUR. WE HAVE A 32 MM HEAD IN THIS CASE WITH NO IMPINGEMENT ISSUES AT HAND.

HISTORICALLY THERE HAS BEEN NO SIGNIFICANT REPORTS WITH NECK SPARING STEMS HOWEVER, DR. FREEMAN AND PIPINO ADVOCATED THE USE OF CUTOUT AND LOW PROFILE CUPS. THIS IS AN AREA WE NEED TO BE VERY DILIGENT ABOUT.