

P236	Positioning of the femoral component in articular surface replacement surgery using the Ci Software	Dietmar Koenig, Joern Michael, Christoph Schnurr
<p>Articular surface replacement surgery is increasingly popular especially for young patients with arthritis of the hip joint. Despite the encouraging clinical results there are problems with this operative procedure. Shimmin could show that 85% of femoral neck fractures were related to malpositioning of the implant. At least 130° CCD angle should be achieved to prevent femoral neck fractures.</p> <p>We compared the CCD angles, anteversion and depth of the inserted caps as well as the operation time of 30 patients operated in CAS technique with the Ci Software (group I) and 30 consecutive patients undergoing conventional articular surface replacement (group II). Our intention was to check for the accuracy of the CAS implantation of the implanted cup.</p> <p>The preoperative average CCD angle was 135 in group I and 130 in group II. The postoperative average CCD angle was 139 in group I and 134 in group II. Two patients in the conventional group had postoperatively CCD angles below 130° whereas all patients in the CAS group had CCD angles > 130°. The operation time in the CAS group was recorded with on average 134 minutes in comparison to 98 minutes in the conventional group. Comparing the first 15 patients with the following 15 patients the operation time in the CAS group dropped from 153 minutes to 115 minutes ($p < 0.005$). The deviation between planning of the cap position and the verification of the implanted cap was 0,7° for CCD angle, 0,6° for the anteversion and 1,6mm for the depth of the cap.</p> <p>In conclusion the CAS Ci-system allows accurate valgus placement (>130°) of the femoral cap in articular surface replacement. The operation time is definitely longer in the CAS group. A reduction of the rate of femoral neck fractures due to the more precise placement of the cap has to be proven.</p>		