Dokumenttyp: journal article

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Titel des Beitrags: Stem torsion in total hip replacement.

Abstract: The clinical results of THR may be improved by correct femoral torsion. We evaluated the stem position by postoperative CT examination in 60 patients. 60 patients requiring total hip arthroplasty were prospectively enrolled in this study. Minimally invasive THR was performed (anterior approach) in a lateral decubitus position and each patient underwent a postoperative CT examination. The position of the stem was evaluated by an independent external institution. Stem torsion ranged from -19° retrotorsion to 33° antetorsion. Normal antetorsion (i.e 10-15° according to Tönnis) was present in 5 of 60 patients, so the prevalence of abnormal stem antetorsion was 92% (95% CI: 82-97). We found a stem antetorsion outside the range of 0-25° in 21 of 60 hips. Women had a higher mean stem antetorsion (8.0° (SD 11)) than men (1.5° (SD 10)). Postoperative stem antetorsion shows a high variability and is gender-related. We suggest precise assessment of stem antetorsion intraoperatively by means of computer navigation, preparing the femur first. In abnormal stem antetorsion, the cup position can be adjusted using a combined anteversion concept; alternatively, modular femoral components or stems with retroverted or anteverted necks ("retrostem") could be used.

Zeitschriftentitel / Abkürzung: Acta Orthop

Jahr: 2010

Band: 81