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Topic: Hip - i. Arthroplasty

**Purpose:** Simultaneous bilateral THA is emerging. Still to date, there is concern about the safety and reliability. Short-stems provide favorable qualities using a MIS-technique, preservation of soft tissue and bone stock and a satisfying metaphyseal osteointegration. However, long-term-results are missing. Purpose of this prospective study is a comparison of postoperative clinical results and radiographic alterations in 108 unilateral vs. 108 simultaneous bilateral cases, using a member of the newest generation of short-stems in a 2 year-follow-up.

**Methods:** A total of 216 short-stems (optimys, Mathys Ltd) was implanted in 162 consecutive patients with a cementless cup. Full-weight-bearing was allowed. Groups: unilateral (108 hips) vs. bilateral (108 hips). HHS, VAS-pain and VAS-satisfaction were assessed preop and at 6w, 6m, 1y and 2y. X-rays were done in a standardized technique. Subsidence was measured in a digital technique. Rate of postoperative anemia and rate of transfusion were evaluated.

**Results:** HHS, VAS-pain and VAS-satisfaction showed no significant differences (p>0.05). Measurable subsidence over 2mm was detected in a total of 15.3%. After 6w almost no progression could be found. Postoperative haemoglobin decreased in unilateral group by 3.2 g/dl, 3 patients (2.8%) received transfusion. In bilateral group haemoglobin decreased by 4.6 g/dl and 7 patients (13.0%) received transfusion.

**Conclusion:** Simultaneous bilateral THA with a short-stem is a safe and satisfying procedure. Being able to utilize MIS-technique, sparing soft-tissue along with an early and stable osteointegration by metaphyseal anchoring supports the usage of this device in bilateral THA. Clinical results are excellent. However, risk of blood-transfusion is increased.