

**FC-017****Treatment of pathologic acetabular fractures with tri-flange reconstruction cages****E. Mortensen**, P. Horstmann, W. Hettwer, M.S. Soerensen, M. Mørk Petersen*Muskuloskeletal Tumor Section, Department of Orthopaedics, University of Copenhagen, Copenhagen, Denmark*

Introduction: Periacetabular reconstruction for metastatic bone disease can be accomplished with a composite construct of PMMA and any combination of metal augments, mesh, pins, cages and/or plates. Reinforcement of such constructs by transiliac Steinmann pin fixation according to the technique described by Harrington or one of its modifications is typically recommended for more extensive lesions involving the acetabulum. We describe a cohort of patients treated with a simple cemented standard tri-flange pelvic reconstruction cage without additional transiliac Steinmann pin fixation.

Methods: We performed a retrospective review of all consecutive adult patients who underwent endoprosthetic reconstruction for pathologic fracture of the acetabulum in our specialised orthopaedic oncology unit between January 2008 - September 2014. We identified 20 patients (12f, 8m) with a mean age of 70 years (range 49-92) who received 21 implants, however, one patient was excluded from analysis as pathological examination failed to demonstrate any sign of malignancy. One patient with radiation induced, bilateral acetabular fractures, received custom triflange components (Mobelife), while standard, long flanged stainless steel cages (Link partial pelvis replacement) were implanted in the remaining 18 patients. Cemented acetabular components (Lubinus Eccentric) were used in all patients.

Results: Seven patients succumbed to their disease with the first year after operation, corresponding to an overall survival rate of 64 % at one year. There were 3 complications requiring a second intervention, 2 dislocations, treated with implantation of a constraint device and one wound dehiscence, treated with wound revision and primary closure. All patients but one, regained ambulatory function and we did not observe any failures of the pelvic reconstruction constructs.

Conclusion: Our findings suggest that PMMA augmented standard tri-flange pelvic reconstruction cages can be a valuable treatment option in the management of pathologic acetabular fractures. Excellent construct stability can be achieved independent of supplementary Steinmann pin fixation in most cases, presumably due to the multiple fixation points available in the 2 long iliac flanges.