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Internal hemipelvectomy is a challenging procedure. The most important factor to prevent the local recurrence is performing a resection with adequate margins. The reconstruction after the tumor resection must be enough stable to provide better function than the external hemipelvectomy. Many reconstruction methods have been used to replace the resected bone. We evaluate the early clinical and functional results of a periacetabular reconstructive ice cream cone prosthesis. We report the results of a case series of 16 internal hemipelvectomies performed in a single center from 2008-2014 and reconstructed with an ice cream cone type prosthesis. 2 reconstructions included proximal femur and one of them was a silver coated prosthesis. 9/16 patients had wide resection and 3 had marginal resections. The minimum follow-up is 6 months. 4/16 patients had wound infection. One of them needed a one-stage prosthesis revision, 2 were solved with irrigation and debridement and plastic surgery reconstruction with a rectus abdominis flap. 1 patient had an instable prosthesis and needed a revision procedure. 4 patients had local recurrence. MSTS 6 months after surgery was 14.8 (49.3%). Function at 6 months was above the 50% MSTS in 9/16 patients. Medium anterior-posterior angle was 38.5° (10-80°). Post operative limb length discrepancy was 14.5 mm (5-31 mm). Ice cream cone prosthesis provides a reliable and versatile reconstruction that avoids the problems with prosthesis adaptation of custom made prosthesis and allograft. Level evidence IV, observational study.

Image 1._ Anteroposterior radiography showing a grade 2 Chondrosarcoma treated with a zone II-IIIP resection and reconstruction with ice cream cone prosthesis.

