

## **Evaluation of Surgical Techniques and Treatment Outcome of Pelvic Metastases**

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**Objective:** The treatment of pelvic and sacral metastases remains diverse without a standard protocol. We retrospectively viewed different types of surgical procedures for pelvic metastases, especially for periacetabular metastases. **Materials and Methods:** Two hundred twenty-eight pelvic metastatic patients underwent surgical treatment between Jul 2000 and Jul 2014. The series included 124 female patients and 104 male patients, with an average of 53.7 years. The main pathological diagnoses were: 65 patient with metastatic lung cancer, 33 kidney cancer, 18 breast cancer, 15 thyroid cancer, 9 bladder cancer, 8 prostate cancer, 13 liver cancer, 13 colon cancer, 3 gastric cancer and 3 gynecological cancer. There were 25 metastases were diagnosed as unknown primary source. **Results:** the defect was reconstructed by screw-rods system in 39 patients and the acetabula were reconstructed in 162 patients. In acetabular reconstruction group, including bone cement arthroplasty in 27 patients, acetabular reinforcement with winged cup in 45 patients, Steinmann Pin with bone cement acetabuloplasty in 21 patients and pelvic prosthetic reconstruction in 69 patients. Simple tumor resection was done in 18 patients and hemipelvectomy in 9 patients. The median following up was 13 months ranging from 6 to 24 months. Fifty-seven patients were lost following up. Pain and mobility improvements were seen in all patients after operation. The average VAS pain score was 7.2 preoperatively and 3.5 postoperatively. Function was evaluated based on MST93 score system. Average MST93 functional score was 18.3 in acetabular reconstruction group and was 23.5 in no acetabular invated group. In patients with type III acetabular metastatic lesion, we used two types of reconstruction technique, the average MST93 functional score was 17.6 in patients with Steinmann Pin combining with bone cement acetabuloplasty and was 18.9 in patients with pelvic prosthetic reconstruction. Local recurrence was found in 21 patients (12.3%). **Conclusion:** The indication of surgical intervention for pelvic metastasis is severe pain and difficulty in ambulation caused by metastatic lesions. The surgical procedure for most metastases is intralesional surgery, wide or marginal resection is an alternative method for solitary or good prognostic pelvic metastasis. For patients with type III acetabular metastatic lesion, from the functional point of view, the technique of pelvic prosthetic reconstruction was better than that with Steinmann Pin and bone cement acetabuloplasty.