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## **Complications Of The Pelvic Girdle Malignant Tumors After Hemipelvectomy**

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**Background:** Internal hemipelvectomy is a variable option to external hemipelvectomy for the treatment of malignant pelvic tumors. Generally the function of a limb salvage procedure is better than amputation. Pelvic malignant tumors can produce large masses without specific symptoms usually except for pain. Because tumors are very deep into the subcutaneous tissue. By the reason of large tumor size, neurovascular structures, anatomical complexity and difficulties in reconstruction of large bony defects, amputation was once the standard surgery for pelvic malignancy for many years. The surgery intends to save the limb and to avoid external hemipelvectomy. However, the complication rate after the removal of large pelvic tumors is high and there are many problems involving reconstruction after internal hemipelvectomy.

**AIM/PURPOSE:** To evaluate morbidity, complications and outcomes in patients with malignant tumors of pelvis treated with limb sparing resection or amputation.

**METHODS:** Between June 2001 and September 2013, 33 cases of malignant tumors at pelvic girdle were treated with Internal hemipelvectomy or external hemipelvectomy. Diagnosis included chondrosarcoma(16), Ewing's sarcoma (6), Osteosarcoma (2), Synovial sarcoma (1), Malignant periferic nerve sheath tumor (1), High grade soft tissue sarcoma (5) and Kaposi sarcoma (1). One of the patients underwent internal hemipelvectomy afterwards applied external hemipelvectomy due to complications. Totally 23 limb sparing surgery and 11 amputation were underwent. We performed analysis of the survival to death, post operative early period (<2 months) and late period (>2 months) enfections, peri-operative blood loss, intensive care unit necessity, flap necrosis and other complications.

**Results:** 33 patients underwent 11 external and 23 internal hemipelvectomy procedures. All internal procedures were reconstructed with tumor resection prothesis. 2 patients was lost post 1.Day and 5.Day in internal group therefore they were excluded from complications. Follow-up of survivors ranged from 8 to 130 months (mean 65 months). The early period (<2 months) complications were reviewed. 6 internal hemipelvectomy (6/21) and 4 external hemipelvectomy (4/11) patients had local enfections. 4 *Escherichia Coli*, 1 *Proteus Mirabilis* and 1 Klebsiella Pneumonia were isolated in the internal group, 1 Acinetobacter Baumanii, 1 Klebsiella Pneumonia, 1 Enterobacter Spp and 1 *Pseudomonos Aureginosa* were isolated in the external group. Totally 10/31 patients had early period enfections. 4 patients had local flap necrosis and secondary external hemipelvectomy was applied one of them due to enfection and local recurrens. All flab necrosis was seen internal group and treated with debridman, wound care and rectus abdominis flab. 6 patients (6/34) had intensive care unit necessity after operation because of peri operative complications. The median duration of these procedures was 6 hours, and the median blood replasman was 5ü ert ml and 0.8 ü fresh frozen plasma. Hip dislocation problem was encountered 4 in internal hemi pelvectomy (4/21) group and they treated with open reduction. Late period

infections was seen 5/21 patients internal and 1/11 external group. 5 *Acinetobacter Baumannii* and 1 *Proteus Mirabilis* were isolated.

**Conclusions:** After the resection of large pelvic malignant tumors, the complication rate is very high. In terms of this rate, the main importance of the limb salvage surgery is to succeed it with a lesser or the least complication rate.

**Figure1**



Figure1: 27 years old Ewing's sarcoma diagnosed patient. Pre operative , post operative, 1.month, 5. months and 18. Month x-rays. Because of the *Acinetobacter Baumannii* infection implants were removed and spacer was applied.