



Hemipelvectomy for Chondrosarcoma Involving Left Thigh Extending Into Left Pelvis and Left Pubic Bone

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ABSTRACT

Primary malignant bone tumors involving the pelvis account for 15% of all primary malignant bone tumors . We report the case of a patient having chondrosarcoma involving left thigh, pelvis and pubic area in a 45 years old male who underwent an extensive internal hemipelvectomy without any bony reconstruction. Follow up of patient at 6 months showed a good oncological and functional outcome. One important prognostic factor on local outcome is the site of the tumour. Those tumours which crossed the sacroiliac joint had a higher incidence of local recurrence compared with those at other sites.

KEYWORDS : Hemipelvectomy; Chondrosarcoma; Malignant tumour; Pelvis

Introduction - Pelvic tumours have been previously treated with standard hemipelvectomy that is hind quarter amputation.[1] Limb salvage around periacetabular area following malignant tumour removal is one of the most challenging procedures in the musculoskeletal oncology. Because of large tumor size and complexity of anatomy in this area, resection of tumour is most difficult and reconstruction is a very demanding procedure here.[2]

Presentation- A 45 year old male presented with a history of swelling left thigh and pain in left hip and buttock for almost 2 years. He was treated unsuccessfully with NSAIDS and was referred to our department for consultation. On examination patient had no systemic problem. On local examination he was having a big 20x15 cm swelling in left thigh more on medial aspect with extension into left pelvis region (figure-1 -a). There was no change in overlying skin. Distal neurovascular status was fine. He had no palpable lymphadenopathy. Laboratory studies were within normal limits. X ray pelvis showed a soft tissue mass with mineralisation (figure -1-b). USG abdomen/pelvis revealed a pelvic mass of the dimensions of 12x8x9 cm with grade 1 hydronephrosis left kidney. MRI pelvis revealed a huge mass in left thigh and pelvis (figure -2,3). Doppler of left thigh showed decreased blood flow in left popliteal vessels. Diagnosis of chondrosarcoma affecting the left thigh and involving the pelvis was made. After all relevant investigations, patient was taken to operation theatre for surgery. A limb salvage procedure was planned but due to extensive nature of tumour and difficulty in removing the tumour en bloc it was decided to perform classical hemipelvectomy in this patient. Incision was made in left inguinal area extending from ASIS to pubis. External iliac vessels, femoral and sciatic nerve were preserved and mobilized from tumour. Muscles attached to pelvic bone were dissected out from affected pelvis that are rectus abdominis, other abdominal muscles, iliacus, gluteal muscles, rectus femoris, adductors, hamstrings. Osteotomies were made through the sacral ala just lateral to neural foramina.

Patient was placed in a balanced skeletal traction. Progressive partial weight bearing with axillary crutches was allowed 1 week post operative. Regular strengthening exercises of psos were started and maintained to highest level of tolerance during this period.

Discussion- Primary malignant bone tumors involving the pelvis account for 15% of all primary malignant bone tumors.[2] Despite significant advances in other modalities, radiographs remain the mainstay for initial assessment and diagnosis of bone tumors.[3,4] Tumors of periacetabulum are amenable to curative intent but require wide or radical margins. Inadequate tumor surgical margin has a high risk of local recurrence and poor prognosis for the patient. One important prognostic factor on local outcome is the site of the tumour. Those tumours which crossed the sacroiliac joint had a higher incidence of local recurrence compared with those at other sites.

The inaccuracy of estimating the degree of tumour extension across the sacroiliac joint, as well as the difficulty in performing the bony cuts during resection combined with tumour infiltration into the sacral wing, explains the higher incidence of inadequate margins and local failure in these patients. This may be attributed to the larger size of peripheral tumours al-

though we were unable to include the volume of the tumour in our study since the relevant information was not available for most of our patients.

Classic hemipelvectomy is a common procedure for the removal of large tumors in location that cannot be removed by limb salvage surgery with an adequate margins.[5] The rate of local recurrence was reported to be 23 to 30%.[6] Clear resection margin is the goal for chondrosarcoma as there seems to be no convincing adjuvant treatment modality to prevent local recurrence in the event of tumor contamination. Since chemo and radio does not influence its prognosis much, the main goal of surgery (internal hemipelvectomy) is to resect the entire lesion. [7]

Conclusion- For hemipelvectomy without reconstruction, surrounding muscles and soft tissue have been dissected out from resected pelvis and need to be repaired and reconstructed to maintain optimal function of hip .Classical hemipelvectomy is the treatment of choice for big chondrosarcomas involving limb, pelvis and pubic area.

Legends -

Figure 1 - showing a huge swelling left thigh extending upto pelvis ,patient is catheterized in or prior to surgery; b- radiograph of pelvis showing soft tissue mass in left thigh with mineralization.



Figure 2 - MRI longitudinal section left thigh and pelvis showing a huge chondrosarcoma

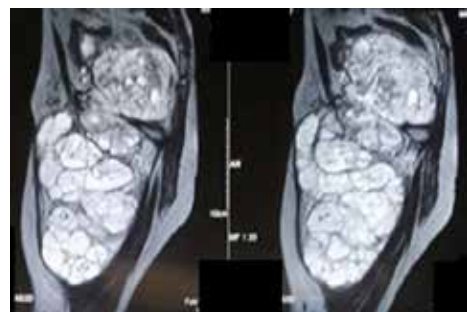
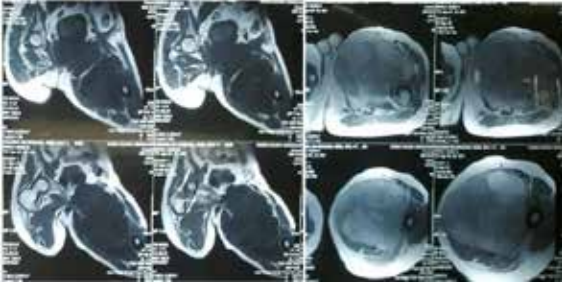


Figure 3– MRI sagittal section of left thigh and pelvis showing extent of mass (sarcoma) ; b - MRI tranverse section of pelvis and left thigh showing huge mass



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