

Medium And Long Term Outcomes Of Different Treatment Modalities For Giant Cell Tumour Of Sacrum

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INTRODUCTION:

Giant cell tumors of the sacrum are rare primary bone tumors, with a 2% to 8.2% incidence rate.¹ They present a challenging therapeutic problem because of a very complicated local anatomy, aggressive behaviour, and nonspecific symptoms that can result in a delayed diagnosis. Optimal management of sacral giant cell tumours (SGCTs) is controversial, and there are no standard treatment guidelines. Here, we present the medium and long term outcome of different treatment modalities for SGCTs in our centre.

METHODS:

We identified all patients in our centre with SGCTs. A minimum of 12 months of follow-up was required for inclusion in the study. 10 cases of SGCTs were identified and all the clinical records of SGCTs who had undergone different treatment modalities for SGCTs between 2005 and 2016 were evaluated retrospectively. The demographic data, the level of tumours, symptoms and signs, different treatment modalities, complications, and follow-up status were analysed.

RESULTS:

There were 10 patients (8 women and 2 men) with an average age of 28 years (range, 14-54 years) when the diagnosis was made. The most common symptom was back or buttock pain with the duration of symptoms between 4 weeks and 12 months. 2 patients presented with neurology at the level S2 downward associated with cauda equine syndrome which remained post treatment. 6 of the tumours extended up to S1, one involving the entire sacrum and one confined to distal S3. The mean duration of follow-up was 79 months (range: 12–132 months). Patients underwent either wide resection plus embolization plus radiotherapy (n=1), wide resection plus radiotherapy (n=1), wide resection alone (n=1), intralesional resection plus embolization plus radiotherapy (n=1), intralesional resection plus radiotherapy (n=1), embolization plus radiotherapy (n=2), radiotherapy alone (n=2), no treatment (n=1). The mean estimated blood loss in the cases that involve surgical intervention (n=5) was 3250

mL (range, 1250-5000 mL). The intralesional resection group without prior embolization had the highest amounts of blood loss (5000 ml). This patient also had perioperative cardiac arrests due to massive blood loss and had to have emergency packing of the wound and was successfully resuscitated, admitted to ICU for 3 days and later had the packs removed, debridement and the curettage procedure completed. 2 out of 5 patients (40%) involve in surgical intervention develop spinal instability that require sacroiliac fusion or pedicle screw instrumentation. 2 patients out of 3 (66.6%) wide resection group develop wound breakdown post operation. All patients retained normal urinary and bowel function if intact prior to treatment (100%). One patient out of 5 female patients at child bearing age without prior ovarian transfer (20%) on radiotherapy treatment developed radiation induced menopause.

However, another patient on radiotherapy with prior ovarian transfer have normal menstruation. One patient died of disease due to refused of any treatment. No early malignancy and local tumour recurrence noted in all patients on treatment in medium and long term follow up.

DISCUSSIONS:

The aim of treatment in SGCTs are to achieve a high chance of tumour control with minimal morbidity. Local control of SGCT can be achieved with wide excision by partial or total sacrectomy, intralesional curettage, radiotherapy and serial embolization. Surgical treatment of SGCTs are associated with a high rate of complications. Choosing an optimal surgical margin is of great importance for local recurrence control and sacral nerve root preservation.² The best local control usually can be best achieved with wide excision of the involved sacrum but almost always results in high morbidity. Currently, most scholars consider preservation of S1-S3 nerve roots and preservation of S1-S5 nerve roots are needed to preserve bowel and bladder function.³ Conservative management with embolization, radiotherapy or curettage is recommended for