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Sacral Giant Cell Tumors - To Operate or not to Operate!

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Introduction: Primary sacral tumors are rare. Sacral giant cell tumor (GCT) accounts for 3% to 4% of all GCTs. Although sacral GCTs are histologically benign, their optimal management is controversial in view of their aggressive behavior which is further complicated by the local anatomy and associated neurological deficit.

Questions: We sought to define a treatment strategy when contemplating management of these uncommon and challenging lesions.

Methods: We treated 27 cases of GCT of sacrum between Jan 2003 to Dec 2011. The median age at presentation was 28 years (range – 20 to 60 years). Patients were treated with definitive angioembolisation or surgery decided on a case to case basis. The upper extent of the lesion and presence or absence of bladder and bowel control were the factors that helped decide the approach.

Results: 19 patients were planned for definitive treatment with angioembolization. The average no: of embolizations performed for each patient was 3 (range 2 - 6) at an average interval of 2 months. Bladder/bowel function was absent in one case pre treatment which did not improve and three cases lost bladder/bowel function due to disease progression post embolization. 10 of the 19 patients treated with angioembolization have stable disease at a median follow up 37 months. Of the rest, 5 underwent subsequent surgery, 3 received radiotherapy and one patient died.

13 patients had surgery (including five cases which progressed on angioembolization). Bladder/bowel function was absent in 4 cases pre surgery which did not improve. No patient lost bladder/bowel function due to surgery. 8 of these 13 are continually disease free at a median follow up 52 months. Of the 5 who recurred 2 had repeat surgery and 3 had radiotherapy.

Conclusions: Sacral GCTs present a management dilemma and are best managed on a case by case basis using various options. A treatment algorithm for these complex lesions is presented below.