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Sacral chordomas with aggressive clinical course: a report of two cases

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Introduction: Sacral chordomas in adults are generally slow-growing tumors associated with a relatively prolonged course. We describe two rare aggressive clinical cases of sacral chordomas who developed early multiple distant metastases.

Methods: A 60-year-old man was admitted to our institution complaining for pain of the sacral region and bowel dysfunction. Rectal examination revealed a large mass overlying the sacrum. Neurological assessment was normal. Radiographs showed an osteolytic lesion of the sacrum. MRI revealed a large tumor of the sacrum compressing the rectum. A second 58-year-old patient was presented with lower back pain and severe coccydynia. Imaging showed a lesion of 5cm x 7cm infiltrating S2, S3 and S4 spinal vertebrates. No evidence of local or distant metastasis was recorded in preoperative staging in any of the patients. Diagnosis of chordoma was established by a core needle biopsy in both of the patients.

Results: The first patient underwent wide tumor resection and total sacrectomy followed by spinopelvic reconstruction via spinoiliac arthrodesis. A vertical rectus abdominis myocutaneous flap was used for the reconstruction of the surgical defect. Histopathological examination showed clear wide surgical margins. 1 year and 6 months postoperatively the patient experienced local recurrence and multiple metastases were detected to the spine and lungs. He died 2 years after initial presentation. The second patient underwent partial sacrectomy involving S2 vertebra. Histopatological examination showed positive surgical margins and the patient received adjuvant radiation therapy. 1 year and 4 months postoperatively the patient presented micronodular lung infiltrations bilaterally.

Conclusion: Chordomas in adults are generally considered as low-grade malignancies with high 10-year survival rates. These lesions tend to recur locally but they metastasize late and in low rates. However, in rare cases rapid disease progression is observed, which is associated with poor prognosis and decreased survivorship.