Management and retrospective analysis of metastatic sacral tumors: analysis of 80 cases

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Introduction. The sacrum is composed of bone, cartilage, bone marrow, neurologic structures as well as notochord remnants. Malignant sacral tumours can arise from any one of its components, but they are relatively rare (6% of all malignant tumors). Metastases were the second most common tumor after chordoma involving the sacrum.

Material and Methods. We retrospectively reviewed 80 patients with metastasis of the sacrum treated between 1975 to December 2012. There were 43 males (53%) and 37 females (47%) treated at a mean age of 60 years (range 22 to 79 years). Pain and neurologic impairment were the most common symptoms. Pain was reported by 93% of the patients at a mean of 7.2 months. Bone scan was positive in 95% of the cases, whereas false negative X-Ray was observed in up to 50% of the patients. Sacrum was the unique site in 47 cases (59%) whereas in 33 cases there were multiple lesions. Biopsy was performed in 71% of the cases. Colorectal and renal carcinoma were the most frequent lesions in patients with sacral metastases, but in 36% of the cases the primary tumor was unknown.

Results: Treatment consisted of chemo/radiotherapy whereas surgery has been used in 15 patients only (19%). Surgery consisted in laminectomy and decompression in 6 cases, palliative curettage in 5 and sacral resection in 4 cases. Palliative selective arterial embolization was used in 11 cases, elettrochemotherapy in 2, termoablation in one. The mean follow-up was 6 years (range 6 months –27 years). All patients but 5 died with disease and the mean overall survival was 6.7 months.

Four patients were alive with metastatic disease at last follow-up whereas one patient was NED after wide surgical resection of the sacrum due to metastatic squamous cell carcinoma and soft tissue reconstruction.

Conclusion. Metastatic tumors of the sacrum had a significantly worse outcome than in other locations. The treatment of cancer patients with bone metastases is multidisciplinary. The goals of treatment in these patients is pain control, maintenance of independence and prevention of tumor progression, and improvement of quality of remaining life. Currently, modern treatments are available for the palliative management of patients with metastatic bone disease. These include modern radiation therapy, chemotherapy, embolization, electrochemotherapy, radiofrequency ablation, and high intensity focused ultrasound.

Keywords : Sacral tumor, Pelvi, Palliative treatment
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