

## Functional Outcome Following 14 Total Sacrectomies without Spino-pelvic Reconstruction

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### Introduction

Following total sacrectomy, many types of spino-pelvic reconstruction have been described in literatures with good functional outcomes. However, complications associated with reconstruction are not uncommon and usually require other surgeries.

### Purpose

Without spino-pelvic reconstruction, we would like to report our experience in term of complication, walking ability, continence control, patient satisfaction and oncologic outcome of patients underwent total sacrectomy.

### Methods

We retrospectively reviewed 14 patients with primary bone tumor at sacrum who underwent total sacrectomy without spino-pelvic reconstruction during 2007-2012. The average age of the patient was 59 years (range, 14-76 years). There were 7 chordomas, 2 low-grade chondrosarcomas, 2 low-grade malignant peripheral nerve sheath tumors, 1 high grade liposarcoma, 1 Ewing sarcoma and 1 giant cell tumor. The level of resection was L5-S1 disc in 13 patients and L4-L5 disc in 1 patient. The median follow-up time was 30 months (range, 9-60 months).

### Results

Eleven patients were alive without evidence of disease at last follow-up. One chondrosarcoma patient had tumor recurrence at 14 months postoperative and required additional surgical resection. Two of patients with high grade sarcomas (liposarcoma and Ewing sarcoma) had recurrences and metastases and died of disease at 5 and 22 months postoperative, respectively. The overall MSTS scores averaged 18 (range, 5-27). Ten patients were able to walk; 2 without walking aid, 3 with cane and 5 with walker. The median time for patients to start walking was 4 months (range, 3-12 months). Another two patients were able to only sit and stand for a short period. The last two patients were bed bound due to their disease progression. Three patients became community ambulators and were able to walk for at least 1 hour with minimal pain. Radiographic findings in these 3 patients revealed autofusion by large callus between the remaining transverse processes and iliums or the remaining lateral sacrum around the sacroiliac joints. At last follow-up 12 patients were incontinent and 2 were incontinent under stress. Immediate complications included wound dehiscence in 12,

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ในการประชุม 18<sup>th</sup> Annual Meeting of the Connective Tissue Oncology Society

ซึ่งจัดขึ้นระหว่างวันที่ ๓๐ ตุลาคม ๒๕๕๖ ถึงวันที่ ๒ พฤศจิกายน ๒๕๕๖ ณ สหรัฐอเมริกา

rectal tear in 1, ureter tear in 1, sciatic nerve injury in 1 and arterial occlusion necessary above knee amputation in 1 patient.

#### Conclusion

Without spino-pelvic reconstruction, most patients with total sacrectomy were able to walk. Good outcome could be expected if the transverse process fused with both sides of iliums. With an acceptable MST5 score and no reconstruction-related complication, this method should be considered as an option following total sacrectomy.