



## FC-003

### Total vertebrectomy in the treatment of spinal tumors

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**Objective:** The management of patients with spinal tumours (primary or metastatic) is challenging and complex. In the case of primary malignant tumours, the only acceptable goal is total resection; the same treatment can also be applied to aggressive benign spinal tumours and for single metastatic lesions from tumours with favourable biology and prognosis. Total vertebrectomy is, nonetheless, a demanding technique with a non-neglectable number of possible complications. The aim of this study was to evaluate the outcome of patients with spinal tumours treated with vertebrectomy.

**Methods:** Five patients with spinal tumours were treated: 3 had malignant tumours (chordoma, angiosarcoma and high grade epithelioid sarcoma), one had an aggressive benign tumour (giant cell tumour (GCT)) and one had a single vertebral metastatic lesion from breast cancer (Table 1). One level vertebrectomy was performed in all cases (Figure 1). Three cases were treated with an all posterior technique (Figure 2, 3, 4 and 5) and the 2 others were treated using a combined approach. Patients were followed clinically and radiographically (including CT and scintigraphy).

**Results:** Complete tumour resection was achieved in 4 cases. There were 2 cases of infection, one that was treated with surgical debridement and antibiotherapy (GCT) and other that rapidly progressed to sepsis and death. Four patients were disease-free at last follow-up (Table 1). In all these case vertebral fusion has been achieved (Figure 6 and 7).

**Conclusion:** Total vertebrectomy is a technically demanding surgery that allows for the complete resection of tumours involving the spine. Type of underlying malignancy, metastatic spread and adjuvant therapeutic options are important in the surgical decision-making. Due to the aggressiveness of the surgery it is not devoid of complications (excessive bleeding, infection) that can and should be managed peri and post-operatively; these risks must be adequately considered by the medical team. When currently indicated and successful it can be curative.

#	Gender, age	Tumour	Surgical Treatment	Complications	Follow-up (months)	Outcome
1	F, 32	T8 giant cell tumour	Total vertebrectomy	Infection	18	Disease-free
2	M, 68	L3 angiosarcoma	Total vertebrectomy	Infection	1	Death
3	F, 51	L1 metastatic lesion	Total vertebrectomy	None	84	Disease-free
4	M, 62	L3 chordoma	Total vertebrectomy	None	79	Disease-free
5	F, 42	L1 high grade epithelioid sarcoma	Total vertebrectomy	None	8	Disease-free

**Table 1.**



**Figure 1.**



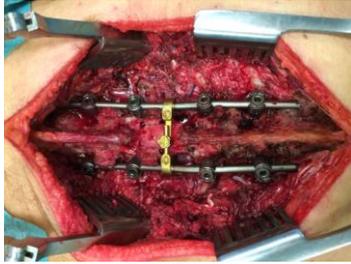
**Figure 2.**



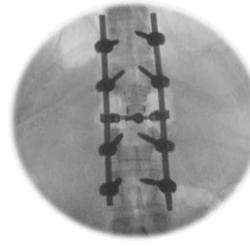
**Figure 3.**



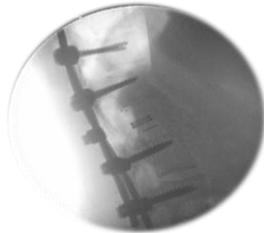
**Figure 4.**



**Figure 5.**



**Figure 6.**



**Figure 7.**