



Radical Resection of a Giant Ewing's Sarcoma of the Anterior Chest Wall

Georgios P. Georghiou MD, Bernardo A. Vidne MD and Milton Saute MD

Department of Cardiothoracic Surgery, Rabin Medical Center (Beilinson Campus), Petah Tiqva, Israel
Affiliated to Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Israel

Key words: chest, chest wall, sarcoma, tumor

IMAJ 2006;8:145-146

A 32 year old man presented with a huge tumor in the right chest wall [Figure 1A] that had increased dramatically in size over the previous 6 months. On physical examination, the mass was hard, fixed and non-tender. Computerized tomography of the chest [Figure 1B] showed an 8.0 x 9.5 cm anterior chest wall mass protruding into the right hemithorax. Radical en bloc

resection of a 7 x 8.5 x 21 cm segment of the anterior chest wall was performed, including the entire gross tumor and a portion of lung and 4 cm of macroscopically normal surrounding tissue [Figure 2A]. The microscopic evaluation of the margins by frozen section was negative. The large chest wall defect was reconstructed with a double-layer composite of Marlex mesh to confer adequate stability and avoid "flail" physiology [Figure

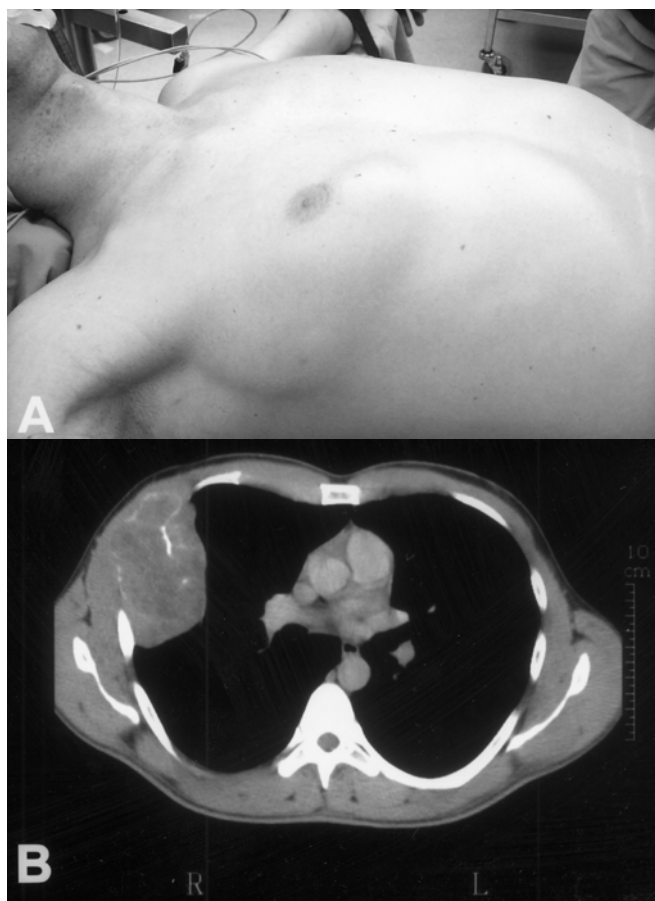


Figure 1. [A] Right chest wall tumor. [B] CT of the chest showing the anterior chest wall mass protruding into the right hemithorax.

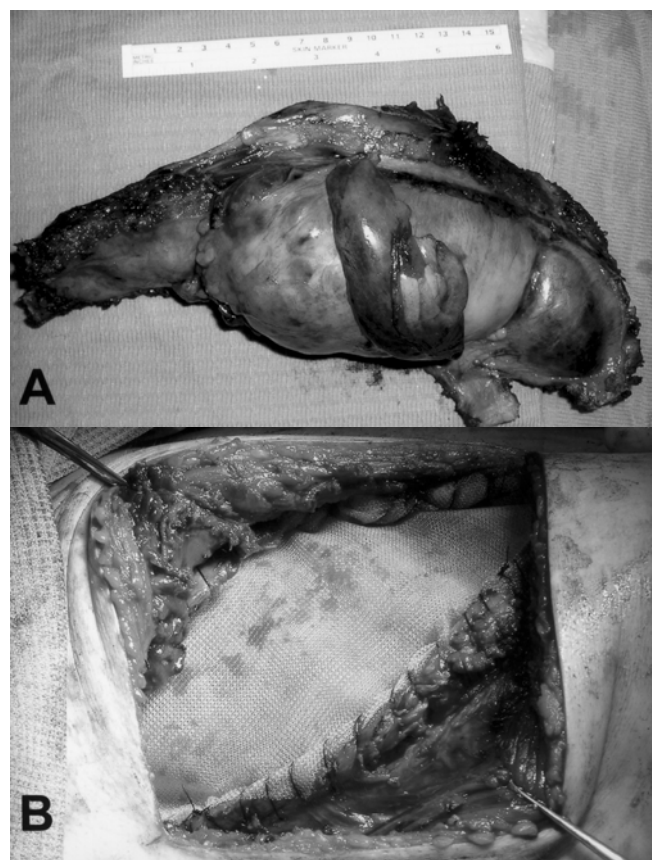


Figure 2. [A] Surgical specimen of the resected tumor. [B] Marlex mesh reconstruction of the chest wall defect.

2B]. Histopathologic study confirmed a completely resected peripheral ectodermal tumor of Ewing's sarcoma. The patient received assisted ventilation with limited peak airway pressures for 6 hours postoperatively. He had an uneventful recovery and was discharged home 4 days after surgery.

Ewing's sarcoma is the most common primary chest wall malignancy in children, and occurs in 8–22% of malignant chest wall lesions in adults [1]. These patients are best treated through a multimodality approach. Postoperative external beam irradiation to the tumor bed provides excellent local control. With complete surgical resection and irradiation, local control rates of 93% have been reported. Chemotherapy is used to control distant disease and has been shown to decrease the incidence of distant metastases and improve survival rates. Doxorubicin, dactinomycin, cyclophosphamide and vincristine are the four drugs most frequently used in combination. In one

study [2], multimodality therapy raised the survival rate to 52% at 5 years. Patients with distant metastases rarely survive more than 5 years.

References

1. Sabanathan S, Salama FD, Morgan WE, Harvey JA. Primary chest wall tumors. *Ann Thorac Surg* 1985;39:4–15.
2. Graeber GM, Jones DR, Pairolero PC. Primary neoplasms. In: Pearson FG, Cooper JD, Deslauriers J, et al., eds. *Thoracic Surgery*. 2nd edn. Philadelphia: Churchill Livingstone, 2002:1417–30.

Correspondence: Dr. G.P. Georgiou, Dept. of Cardiothoracic Surgery, American Heart Institute, P.O. Box 25610, 1311 Nicosia, Cyprus.

Phone: (357) 2281-9666

Fax: (357) 2281-9667

email: georgios@ahi.com.cy