Primary Synovial Sarcoma of the Chest Wall

To the Editor:

We read with interest the recent report by Mukhopadhyay and Aubry[1] regarding the recurrent primary synovial sarcoma of the chest wall. We agree with their conclusion that this rare neoplasm can behave aggressively and should be considered in the differential diagnosis of chest masses, especially in young or middle-aged adults.[1] However, we cannot completely accept their evaluation that the synovial sarcoma reported was derived from chest wall. We also previously experienced a case of recurrent metastatic synovial sarcoma. In our patient, the sarcoma recurred only in visceral and parietal pleura several times and was surgically resected each time. Mukhopadhyay and Aubry reported that imaging revealed extensive pleural masses.[1] At autopsy, the tumor encased the entire left lung in a ring-like fashion and mimicked the growth pattern of a mesothelioma.[1] As the authors described, most synovial sarcoma occurs in the extremities, and synovial sarcoma of the thorax is rare.[2–4] We would appreciate hearing from the authors how they confirmed that the sarcoma originated from chest wall. We would like to know what tissue of the chest wall was the origin of the tumor. Why did the sarcoma develop only in the thoracic space? Why did the sarcoma diffusely involve only intrathoracic organs and not cause destruction of ribs and the thoracic cage? Why did it not invade the chest wall?

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Disclosure: The authors report no conflict of interest.

ISSN: 1556-0864/07/0211-1060

Response to Primary Synovial Sarcoma of the Chest Wall

To the Editor:

We appreciate the interest Drs. Satoh et al. have shown in our recent article describing a case of recurrent primary synovial sarcoma of the chest wall.

The diagnosis of chest wall synovial sarcoma was made based on clinical, radiologic, and pathologic findings, all of which indicated that the tumor involved the chest wall. Clinically, the patient had a palpable mass of the chest wall. A computed tomographic scan of the chest showed a chest wall mass and a lytic lesion of the 7th rib, corroborating the clinical impression. The surgically resected specimen, consisting of a portion of chest wall with ribs, skeletal muscle, diaphragm, and pericardium, showed a 19-cm mass located within the soft tissue of the chest wall, invading skeletal muscle, the 7th rib, and the diaphragm. The pericardium was not involved. Biopsies of the pleura performed during the surgery did not show tumor. Therefore, based on these findings, the tumor was considered primary to the chest wall rather than the pleura.

As to why the tumor only recurred only within the thoracic cavity, one can only speculate. Because the tumor recurred within a few weeks of surgery, one possibility is that tumor seeding of the pleural space may have taken place during surgery. Another possibility is that even though the pleural biopsies were negative, a non-sampled area of pleura may have been involved by tumor. Either hypothesis could explain the growth pattern of the recurrence.

Finally, the authors inquire from what tissue of the chest wall the tumor could have originated. The question is puzzling because synovial sarcoma is a neoplasm of unknown histogenesis. A variety of tissues of origin have been proposed over the years, including synovium, specialized arthrogenous mesenchymal tissue, and undifferentiated mesenchyme.[1] Because this tumor has been described in a multitude of locations other than the extremities, including the parapharyngeal region, abdominal wall, and heart, it is unlikely that the tissue of origin is restricted to any single anatomic location.

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Disclosure: The authors report no conflict of interest.

ISSN: 1556-0864/07/0211-1060