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CASE

The patient is a 30-year-old Hispanic woman who presented to our clinic for evaluation of a chest wall mass. The mass was noted when she was hospitalized 1 month earlier for a cesarean section. At that time, the patient stated that the mass had been present since she was a child living in Honduras. It developed after she fell from her bike, had not changed significantly in the ensuing years, and was painless. CT was ordered following the delivery of her child and was notable for a densely calcified upper anterior chest wall mass, likely osseous in nature, arising from the manubrium. By radiographic appearance, the mass was consistent with an exophytic chondrosarcoma.

History Except for a positive result on a purified protein derivative (PPD) skin test, which was done at the time of delivery, the history was unremarkable. The patient was referred for antituberculous therapy according to local health department protocol, but at the time of her appointment in our clinic, she had not yet presented for an evaluation.

Physical examination The patient was alert, oriented, and in no distress. Weight was 53.4 kg; temperature, 36.6°C (97.9°F); BP, 102/58 mm Hg; pulse, 90 beats per minute. The neck was supple, and there was no palpable adenopathy in the cervical, supraclavicular, or axillary regions. The lungs were clear to auscultation. Cardiac rate and rhythm were regular, with no murmurs, rubs, or gallops. A palpable, approximately 3- to 4-cm hard, nonmobile mass arose from the sternum. The abdomen was soft, nontender, and nondistended with normoactive bowel sounds. No hepatomegaly was appreciated. The extremities were free of edema, clubbing, and cyanosis. The neurologic examination was nonfocal.

Testing Another CT study of the chest wall was ordered, now approximately 4 months following the initial CT. No change in the exophytic mass was noted (see Figure 1). Fine-needle aspiration of the mass was attempted in the clinic but was unsuccessful. Because the mass appeared to be slow growing and because of the patient's social situation, she was referred back to the health department for evaluation and treatment for the positive PPD test result as well as to provide her with additional time for breastfeeding her infant before any surgical interventions.

She returned to the clinic 3 months later, a surgical biopsy was performed, and the pathology report indicated hypertrophic and thickened lamellar bone. There was still a high level of suspicion regarding a malignant diagnosis, so a surgical resection with reconstruction was performed. The final pathol-

FIGURE 1

Calcified mass on the upper anterior chest wall



ogy report indicated that the mass was consistent with a low-grade chondrosarcoma (grade I/III) likely arising from a preexisting osteochondroma. The patient was seen in the clinic 2 weeks following surgery and was healing well with adequate pain control. She will return for regular follow-up.

DISCUSSION

The evaluation of a bone mass—or, more specifically, a chest wall mass—consists of a thorough history and physical examination, radiographic studies (initially a chest film followed by CT), and referral to a thoracic surgeon. The length of time the lesion has been present and whether it has increased in size should be documented, as this information will indicate growth rates, which in turn will assist in the differential diagnosis. CT will establish the extent of the mass—that is, whether it is invading the mediastinum or the pleural or lung parenchyma.

Chondrosarcoma is the second most common primary bone malignancy and is the most common malignancy of the sternum and scapula. The peak incidence is generally in the fourth to sixth decades and the most common sites are the pelvis, femur, and shoulder girdle. Symptoms at presentation are variable. Most patients present with a slowly enlarging, painless mass, although pain or swelling occur at some point as the mass grows larger.^{1,2}

Chondrosarcomas have a relatively indolent course and can arise from transformation of benign lesions such as an endochondroma or osteochondroma. Most chondrosarcomas are resistant to chemotherapy, and resection of the primary tumor is the mainstay of therapy. Development of metastatic disease in someone with a low-grade malignancy, such as this patient had, is rare. □

REFERENCES

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