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CLINICAL HISTORY

This 64-year-old man sought medical attention because of symptoms of prostatism. History and physical examination were non-contributory; however, the routine chest roentgenograms demonstrated a lesion on the right (Fig. 1). Additional inquiry divulged only that he had experienced a severe cold approximately five months before admission, accompanied by cough and fever, without hemoptysis. He had smoked moderately in the past. He had lost about five pounds during the five weeks preceding admission. However, he attributed this to diet. A tuberculin skin test was negative.

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DIAGNOSIS: Chondrosarcoma of Rib

The chest roentgenogram revealed a moderately large soft tissue mass related to the anterior end of the fifth rib in both frontal and lateral views. Laminograms (Fig. 2) confirmed this localization. Increased density about the end of the slightly expanded rib, thick curvilinear calcification extending from the rib into the tumor, and flecks of calcium within the tumor led to the roentgenologist's impression of chondrosarcoma.

Chondrosarcoma arises from cartilage cells and tends to maintain its cartilaginous nature throughout its evolution. It may occur in practically any bone pre-formed in cartilage, although it is relatively rare in the jaw. It is twice as common as Ewing's sarcoma, but only about half as common as osteogenic sarcoma. Cartilaginous tumors of ribs, sternum, or vertebra are either already malignant or potentially so. This is less often the case with cartilaginous tumors of the extremities. Chondrosarcomas are usually grouped as central or peripheral. A central chondrosarcoma arises in the interior of the affected bone, either from a previous enchondroma or de novo. The peripheral chondrosarcoma arises in relation to the surface of the bone. It may evolve as a complication of hereditary multiple exostosis or, more rarely, of a solitary osteocartilaginous exostosis, as suggested in this case.

The roentgen appearance is variable, but commonly a large soft tissue mass containing radiopaque streaks extends out from the affected bone. Not uncommonly one sees spotty or fuzzy radiopacity, representing calcification of the cartilage matrix.

Treatment is surgical extirpation. A better prognosis is reported in the more calcified tumors.

REFERENCES