Intraosseous Lipoma of the Second Thoracic Costa

Torakal İkinci Kostanın İntraosseöz Lipomu

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SUMMARY
Intraosseous lipomas are unusual primary benign tumors of the bone. In this article, a possible intraosseous lipoma involving the right anterior second thoracic costa, documented on preoperative chest computed tomography scanning, was surgically excised and pathologically examined.

Key words: Costa; intraosseous lipoma; surgical resection.

INTRODUCTION
Intraosseous lipomas are rare and benign lesions. Costal intraosseous lesions are extremely rare. Intraosseous lipomas represent fewer than 0.08% of all primary bone tumors and are usually asymptomatic, the diagnosis being made incidentally.[1]

We present a case of intraosseous lipoma of the costa, which, based on our literature survey and to the best of our knowledge, has an extremely rare incidence.

CASE REPORT
Fifty-four-year-old woman had a routine radiological study of the chest in which an abnormality in the right second costa was identified. The patient was completely asymptomatic. Physical examination and laboratory studies were normal.

X-ray of the chest revealed a large expansive lytic destructive lesion arising from the anterior middle of right second costa.

Chest computed tomography revealed a low-density expansile mass overlying the right second costa and a soft tissue (4x6 cm) within the second costa (Fig. 1).

On the basis of imaging findings, differential diagnosis included giant cell tumor, plasmacytoma, fibrous dysplasia, enchondroma and less likely aneurysmal bone cyst.

Under general anesthesia, the patient underwent en bloc wide surgical resection of the right second costa and intercostal muscles, revealing a cystic, lobulated tumor on the costal surface.

Histopathological analysis showed mature fat cells without signs of calcification (Fig. 2a-c).

The patient had an uneventful postoperative course and was discharged on the third postoperative day. She has been followed up for 1.5 years without evidence of recurrence.

DISCUSSION
Literature review reveals that intraosseous lipoma is a very rare benign bone tumor accounting for ap-
proximately 0.1% of all bone tumors.\cite{2,3}

Intraosseous lipoma was first reported by Wehrsig in 1910, who described a case of intraosseous lipoma of the proximal fibula in a 5-year-old girl.\cite{4}

The occurrence of the tumor inside the bone trabecula suggests the origin from the bone marrow adipose tissue. Tumors most commonly arise in the fourth age decade with a slight male preponderance. About half of the patients present without symptoms.\cite{5}

Although its pathogenesis has not been defined thoroughly yet, some hypotheses were suggested seem possible. One hypothesis is that a true tumor is developed in intraosseous adipose tissue which arises from mature lipocytes: another possible mechanism is a reactive osseous change induced by trauma, infection and vascular compromise among others.\cite{6}

Intraosseous lipoma of bone has been reported to occur usually in metaphyseal or epiphyseal regions of long bones such as femur, tibia, fibula, and calcaneus.\cite{7}

The sites of involvement were widespread throughout the axial and appendicular skeleton, with a predilection for the proximal femur (35%), the tibia and fibula (21%), calcaneus (8%), and ilium (8%). Intraosseous lipoma of the costa is an extremely uncommon benign tumor, with only two cases having been published in the literature.\cite{8,9}

Diagnosis is usually made with classic radiographic features. In asymptomatic cases, a regular clinical and radiographic follow-up is the best option. Although intraosseous lipomas are generally considered benign, malignant transformation has

![Fig. 1. Chest computed tomography.](image1)

![Fig. 2. Histopathology images (a) (H-E x 40), (b) (H-E x 100), (c) (H-E x 200).](image2)
been described in 5 cases and recurrence in 2 cases.\textsuperscript{[5]} When symptoms are present, treatment should consist of surgical resection.

\textbf{RESULTS}

Intraosseous lipoma of the costa is an extremely uncommon tumor that has been found incidentally. It should be considered in the differential diagnosis of costa tumors, especially in asymptomatic patients.

\textbf{REFERENCES}