Parathyroid gland cyst as an unusual cause of superior mediastinal mass

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INTRODUCTION

Microscopic cysts of the parathyroid gland can be found in both normal and pathologically affected parathyroid glands while clinical manifestation is quite rare. Radiologists or clinicians can therefore misinterpret parathyroid gland cysts. They are usually presented like solitary mass containing bright or milk-like liquid, varying in size from 1 cm to 9 cm (1). The wall of the cyst is composed of fibrous tissue and surrounded with a layer of cuboid cells. Some authors have opinion that parathyroid cysts represent confluent microcysts, while other suggest that parathyroid cysts represent the cystic degeneration of adenoma or some other hyperplastic node what may explain their relation with parathyroid function. Functional cysts are less frequent and they are usually detected due to associated hypercalcemia, while non-functional cysts remain asymptomatic or cause the symptoms because of mass effect on surrounding organs (2).

CASE REPORT

The finding of a chest X ray performed in a 59-year-old man as a routine diagnostic tool for preoperative assessment for inguinal hernia showed an asymmetric opacity in the superior mediastinum, eccentric to the right (Figures 1,2).

CT of the chest was indicated and obtained images showed the presence of right paratracheal cystic mass extending from sternoclavicular joint to aygos vein. Although the patient was asymptomatic, anterolateral thoracotomy with cyst extirpation was performed. Histopathologic evaluation revealed a cyst originating from parathyroid gland.

KEY WORDS: Parathyroid Glands; Mediastinal Cyst

Figure 1. Chest X ray showing widening of the superior mediastinum opacity to the right

The patient was asymptomatic. The findings from the physical examination of the chest were normal, and the results of laboratory tests showed no significant abnormalities. Abdominal ultrasound revealed no abnormalities. Bronchoscopic examination found trachea slightly displaced to the left and extramural compression of the right tracheal wall. The mass was approximately followed in the length of three tracheal cartilage rings. During video-assisted thoracoscopy a large retrocaval cyst was

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seen. Because extirpation was not possible anterolateral thoraco-
tomy was indicated, and total extirpation of the cyst was per-
formed. The cyst had well-defined margins and measured 10 cm
in diameter. Histopathologic evaluation found a cyst originating
from parathyroid gland and containing fibrous and adipose tissue
with rare focal lymphocytes, and with main and oxyphilic cells of
the parathyroid gland. Internal surface was covered with one line
of cuboid epithelial cells.
Postoperative course was normal. No significant abnormalities
were seen on control chest X ray.

DISCUSSION
While microscopic cysts of the parathyroid gland are frequently
seen on histological examination, macroscopic cysts, measuring
more than 1 cm in diameter are extremely rare. Since 1905 when
parathyroid gland cyst was reported for the first time (3), 162
cases of parathyroid gland cysts have been reported (4). They
usually measure between 3 cm to 5 cm. They are most frequent-
ly localized in the neck while only 10% to 15% are found in medi-
astinum (5). They appear in all age groups, but most frequently in
the 5th and 6th decade of one’s lifetime. Nonfunctional cysts are
2.5 times more frequent in women, while functional cysts are 1.6
times more frequent in men (5). Although rare, parathyroid gland
cysts should be considered in the differential diagnosis of the
neck and mediastinal masses. In order to establish correct diag-
nosis recognition of the cystic characteristics of the mass and
aspiration of the fluid are important (2,5). The level of parathyroid
hormone can be elevated in functional cysts (4,6) although Clark
does not consider it as definite sign to confirm the presence of
functional cyst (5).

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