

Cervical Thymic Cyst in the Elderly : A Case Report

Cervical thymic cyst is uncommon and usually occurs in the first and second decades. Cervical thymic cyst after the third decade is so rare that it is very difficult to diagnose in spite of its typical location. We present a rare case of cervical thymic cyst in the lower left - anterior of the neck in a 50-year-old woman. It showed well-defined, anechoic cyst on ultrasonography and non-enhancing low attenuation mass on CT. A typical anatomic relationship was noted between the mass and carotid sheath.

Key Words: Cyst; Mediastinal cyst

Jung Im Jung, Seog Hee Park, Jae Mun Lee,
Kyo Young Lee*

Departments of Radiology and Pathology*, St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

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Address for correspondence

Jung Im Jung, M.D.
Department of Radiology, St. Mary's Hospital,
College of Medicine, The Catholic University of
Korea, 62 Youido-dong, Yongsungpo-gu, Seoul
150-010, Korea
Tel: +82.2-3779-1277, Fax: +82.2-783-5288
E-mail: jjung@cmc.cuk.ac.kr

INTRODUCTION

A cervical mass originating from the thymus is uncommon. Two thirds of the cases reported are seen in the first decade of life, whereas the remainder manifests in the second and third decades (1). Cervical thymic cyst after the third decade is so rare that it is very difficult to diagnose in spite of its typical location. We present a case of cervical thymic cyst arising from the lower left anterior of the neck in a 50-year-old patient.

CASE REPORT

A 50 year-old woman presented with a palpable neck mass for two years. On physical examination, an approximately 3-cm-sized, non-tender, soft mass was palpable in the lower left anterior of the neck. The patient was free of any symptoms. Ultrasonography at admission showed a 3×4 cm-sized anechoic mass with homogeneous posterior enhancement in the lower left anterior of the neck (Fig. 1). Contrast-enhanced CT showed a well-defined, 3×4 cm-sized, homogeneously hypoattenuated mass, extending from the inferior pole of the left thyroid gland to the level of the aortic arch. It passed along the left lateral wall of the trachea and displaced the left common carotid artery and subclavian artery laterally.

The mass did not show contrast enhancement (Fig. 2). At surgery, a well-encapsulated, cystic mass was noted in the left anterior of the neck and was easily separated from the thyroid gland. No connection was found be-

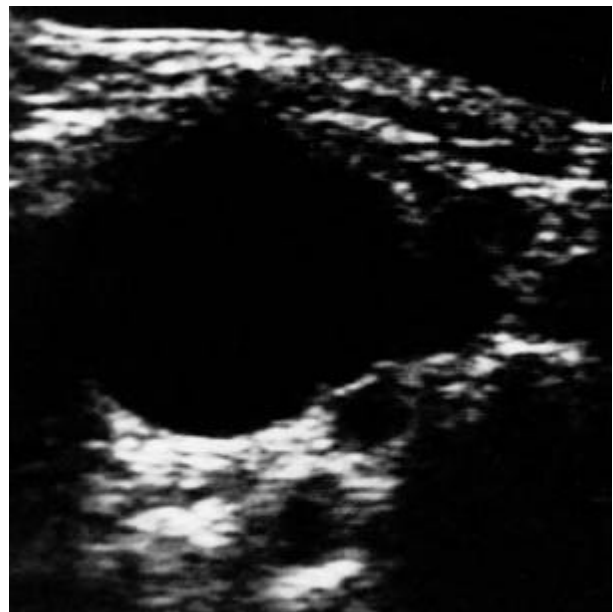


Fig. 1. Ultrasonography of the neck shows about a 3×4 cm sized, well-defined, anechoic cystic mass in the lower left part of the neck. Homogeneous posterior enhancement is noted.

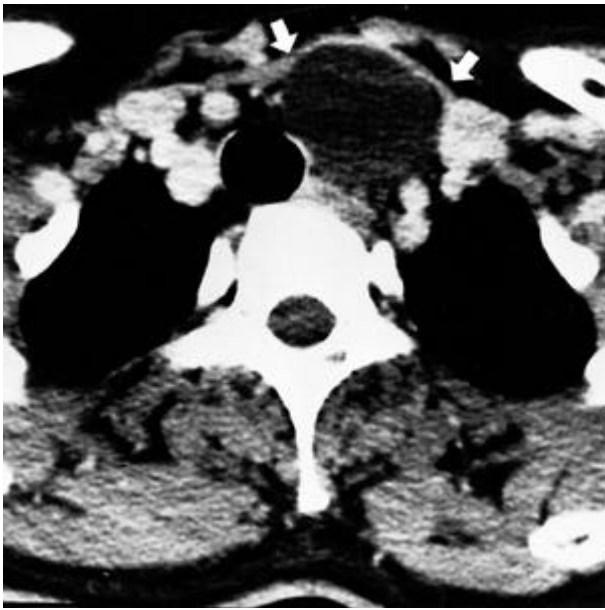


Fig. 2. Contrast enhanced neck CT shows a well-defined, homogeneous low-density mass in the lower left anterior of the neck (white arrows). It abuts the trachea medially and displaces the brachiocephalic vessels laterally.

tween the mass and mediastinum. Histologic findings were consistent with ectopic thymic cyst (Fig. 3).

DISCUSSION

Cervical thymic cyst is uncommon and the cervical thymic cyst in the elderly is very rare. Al-Shihabi and Jackson analyzed the 32 cases of the cervical thymic cysts that had been documented in English literature from 1901 to 1981 (2). Among them, six cases occurred after the third decades (19%) and only two cases occurred after the fifties (6%). Rarity of the cervical thymic cyst in the elderly makes us difficult to diagnose the cervical thymic cyst in spite of its typical location.

Thymus develops usually from the ventral portion of the third pharyngeal pouches or infrequently from the ventral portion of the fourth pharyngeal pouches. It descends into the anterior mediastinum by the sixth week of gestation. Thymic ectopia results from the failure of this migration (3). Masses derived from the third pharyngeal pouch are usually adherent to the carotid sheath and pass downward laterally to the thyroid capsule and along the anterior border of the sternocleidomastoid muscle to the manubrium. A fourth pharyngeal pouch tract would extend from the apex of the pyriform sinus inferiorly to the superior laryngeal nerve, externally to the recurrent laryngeal nerve and pass inferiorly along the trachea to eventually swing forward between the arch of

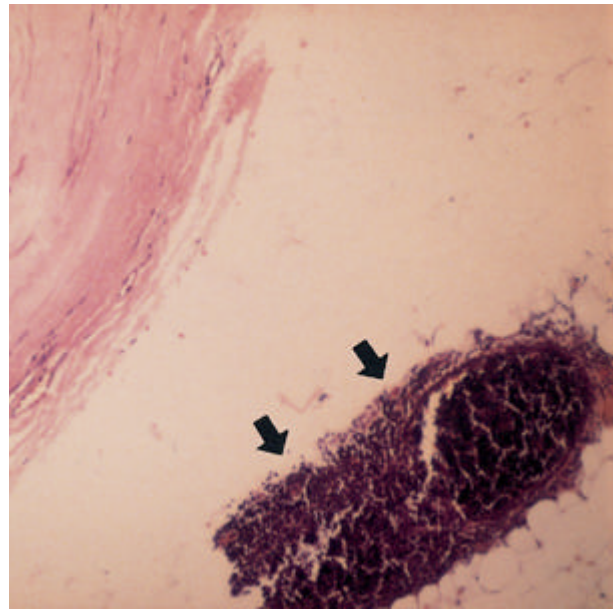


Fig. 3. On photomicrography (H&E stain, $\times 40$), the cyst wall consists of a single layer of cuboidal epithelium, underlying fibrous tissue. Surrounding thymic tissue remnants is present on the right (arrows).

the aorta and the subclavian artery (4, 5). This anatomical understanding is important to make a correct diagnosis of ectopic thymic cyst; Burton *et al.* reported that congenital cyst related to the carotid sheath would provide the clue for the diagnosis of thymic cyst (5).

Cervical thymic cysts vary in size from 1 to 17 cm, and most of these lesions are multilocular with a smooth inner lining. The cyst wall consists of fibrous tissue that often contains aggregates of lymphocytes, areas of cystic degeneration, and microcysts. The cyst lining consists of cuboid, ciliated, nonciliated columnar or squamous epithelium. Pathologically, the diagnosis of thymic cyst depends upon the findings of thymic tissue remnants and Hassall's corpuscles in the cyst wall (4).

The pathogenetic mechanism in the development of thymic cyst is controversial. It has been proposed that thymic cyst has a degenerative (alteration of Hassall's corpuscle), developmental (growth of persisting thymopharyngeal duct), inflammatory, or neoplastic origin (6). The cyst usually manifests as a slow growing mass, and sudden enlargement can occur secondary to hemorrhage. The cysts may be completely isolated in the neck or attached to the mediastinal thymus by fibrous cord. In addition, there is no association between thymic cysts and myasthenia gravis (7).

Differential diagnosis of cystic masses in the lower neck varies according to age. In an older person as in our case, the cystic mass includes thyroid cyst and parathyroid cyst (1). It is very difficult to differentiate from

each other in morphological configurations. However thymic cyst is situated more commonly in the lower neck with common involvement of the mediastinum than other cysts (1). Additionally biochemical and/or morphological analysis of aspirated fluid of the cyst may be helpful in differential diagnosis of the cysts. In parathyroid cyst, parathyroid hormone assay of the cystic fluid is diagnostic (8). In thyroid cyst, biochemical markers of cystic fluid indicate colloidlike features and/or an admixture of thyroid tissue component (9) whereas fluid of thymic cysts contains cholesterol crystals (2).

Choice of treatment of thymic cyst is surgical excision. Recently, one case was reported in which thymic cyst was successfully treated with ethanol sclerosis. It would be a promising treatment of thymic cyst, especially in high-risk patients of operation (10).

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