

Thymolipoma of Anterior Neck- a case report

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Abstract: Thymolipoma is a benign tumor of thymus composed of thymic elements and adipose tissue. We herein report a 62 year female who presented with a painless neck mass. Fine Needle Aspiration study mimicked papillary carcinoma of thyroid. On surgical resection it was a yellowish mass which on histology showed abundant adipose tissue admixed with thymic tissue Hassall's corpuscles and numerous medium caliber blood vessels. The case was designated as thymolipoma. Though a benign tumor, we must remember that this anterior mediastinal tumor can present as a neck mass and must be ruled out before giving the provisional diagnosis.

Keywords: Thymolipoma, anterior mediastinal tumor, neck mass, Hassall's corpuscles.

INTRODUCTION

The term thymolipoma was introduced in 1948 by Hall [1]. Thymolipoma is a rare, slow-growing, benign, neoplasm of the thymus [2]. Thymolipoma comprises 2-9% of all thymic neoplasms [3]. Incidence of thymolipoma is 12 patients per 1 million people per year [4], it is a neoplasm of thymic fat [5]. Thymohemangiolioma differs from thymolipoma by the presence of prominent vascular component in thymohemangiolioma. There is no gender predilection and seen in age group ranging from 3 - 76 years [6, 7]. The pathogenesis of this lesion is uncertain. Its peculiar composition has given rise to different theories about its origin. Thymic hyperplasia with regression has been suggested in the histogenesis of thymolipoma. Other proposed theories include hyperplasia of mediastinal fatty and thymic elements, true mixed neoplasia of both endodermal (thymic tissue) and mesodermal (adipose tissue) components, fatty neoplasia or hyperplasia that incidentally engulfs a normal thymic remnant, fatty degeneration of a hyperplastic thymus, abnormal hyperplasia of fatty tissue with subsequent involution of the normal thymic elements, or true thymomas undergoing fatty change in a similar manner to fatty replacement of the normal aging thymus[8].

CASE REPORT

A 62 year old lady presented with painless swelling in neck over the thyroid region just above the sternal notch. It was a painless nontender, non suppurative, non pulsatile, soft mass extending from cricoid cartilage to sternal notch and measures to be

6cm x 4cm. She was asymptomatic, with pulse of 88beats/minute and blood pressure was recorded as 130/95mm of Hg. On palpation there was a mass which appeared to be present over the isthmus. Complete blood count was within normal limits, Chest X-ray revealed no abnormality. Thyroid function tests were done and they were within normal range. Fine needle aspiration was done, which showed presence of epithelial cells and psammoma bodies, and a suspicion of papillary carcinoma of thyroid was made, and biopsy was advised for confirmation. The lesion was resected for suspicion of carcinoma. Intra-operatively it was found that the thyroid was normal. A yellowish mass was present between thyroid gland and sternal notch. The mass was then resected and sent for histopathologic examination.

Grossly the mass was yellowish white weighing 15gm and was having irregular contour, it was lobulated and measured 3x2x2 cm. Low power view showed a well demarcated lesion admixed with adipose tissue and areas of calcifications. The tissue consisted of scattered thymic tissue admixed with substantial amount of mature adipose tissue and many medium sized blood vessels. The blood vessels had relatively thin smooth muscle layer and were seen in good numbers, some of them were. The thymic tissue showed lobules with recognizable cortex, medulla and occasional Hassall's corpuscles. The calcifications were present in some areas resembling psammoma bodies. No areas of necrosis were identified. There was no cytologic atypia, no mitotic figures seen.

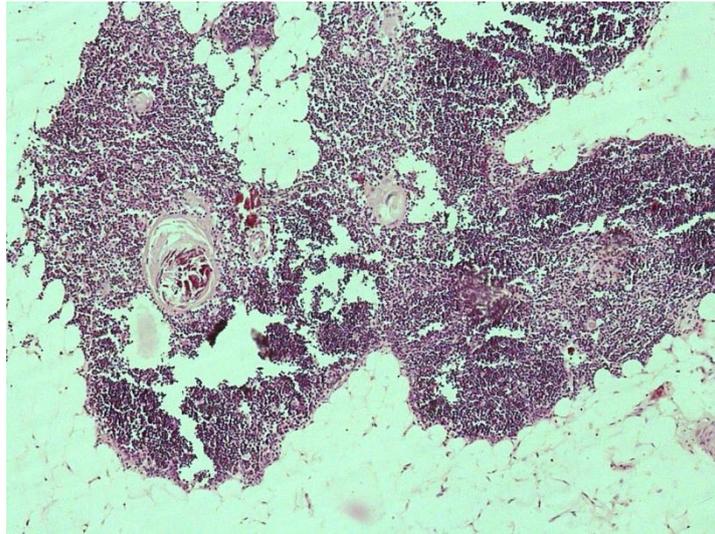


Fig 1: 100x showing Hassall's corpuscle, fat, blood vessels and thymic tissue

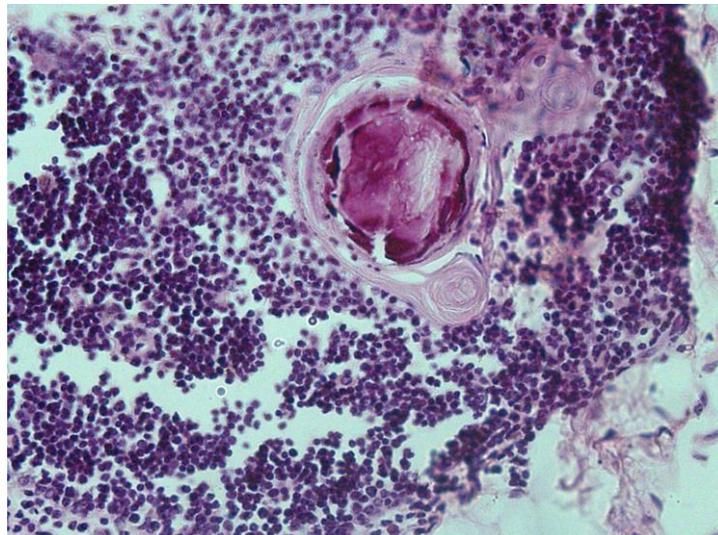


Fig 2: 400X showing thymic tissue and calcifications

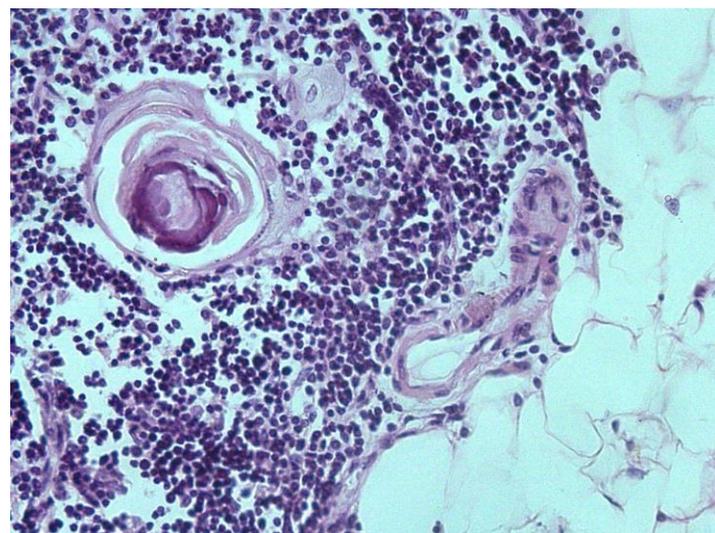


Fig 3: 400x showing blood vessels, adipose tissue, and thymic tissue

DISCUSSION

Thymolipomas are benign neoplasms of anterior mediastinum, which though common in second to fourth decade but can occur at any age. Most of the tumors are asymptomatic and they are detected incidentally. Symptoms start appearing when tumor becomes large, symptoms include cough dyspnea and chest pain due to tumor compressing the adjacent structures. Thymolipomas are rarely associated with Graves's disease, pure red cell aplasia, aplastic anaemia, hypogammaglobinemia and myasthenia gravis [2]. Histologically the typical appearance of thymolipomas is that of large areas of mature adipose tissue admixed with thymic tissue recognized by its cortico medullary arrangement and presence of Hassall's corpuscles. Though many thymolipomas have been described in association with lymphangioma and fibrous tissue, only one case of thymolipoma with hemangiomatous component has been reported [2]. But in this case though we see good number of blood vessels but the blood vessels are not thick walled and there is no congestion seen in vessels so we exclude thymohemangioma.

Neck is a very uncommon site for the presence of thymic tissue and development of thymolipoma. Though the tumor belongs to anterior mediastinum but its presentation as a neck mass has not been reported. And most of the thyroid neoplasms occur commonly in neck and hence the rare thymolipomas must be kept in mind. Also the lipomas of uncommon locations like anterior neck or anterior mediastinum should be adequately sampled to exclude possibility of thymolipoma. Also teratomas occur in anterior mediastinum and hence must be excluded. Increased vascularity can occur occasionally in thymic hyperplasia with regressive change [2]. Thymic hyperplasia is defined as increase in volume and weight of the thymic gland beyond the normal range for patients' age. Moran *et al.*; [1] suggested that thymic hyperplasia is distinguished from thymolipoma by the presence of thymic tissue with a perfectly normal architecture, as opposed to thymolipoma in which the proportion of fatty elements to thymic epithelial elements will be markedly distorted and the lobular architecture of gland is effaced.

CONCLUSION

The anterior neck above the jugular notch is a uncommon site for occurrence of thymolipomas, but must be kept in mind both by clinicians and pathologists.

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