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A Diagnostic Surprise in a Case Series of Thymoma

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ABSTRACT

Thymomas are tumours that arise from the thymic epithelial cells. They occur in adults above 40 years of age with no major gender predilection. All thymomas, irrespective of subtype, are considered malignant. They are usually associated with myasthenia gravis. Common location is in the anterosuperior mediastinum. The prognosis is poor with a ten year survival rate.

Key words: Thymomas, Thymic epithelial cells, Anterosuperior mediastinum

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CASE REPORT

A 37 year old male, came with H/O odynophagia and C/O difficulty in breathing on raising both hands above the head. Diffuse enlargement of the neck and it did not move on deglutition [1].

CT Imaging showed thymic lesion possibly Lymphoma. FNAC done was reported as Non-Hodgkins Lymphoma. Surgery of Thymectomy with debulking was done [2].

Grossly, we received the thymectomy specimen in piece meal of four large fragments and multiple tiny fragments with external surface irregular, grey-white to dark brown and cut surface was firm and grey-white (Figure 1).

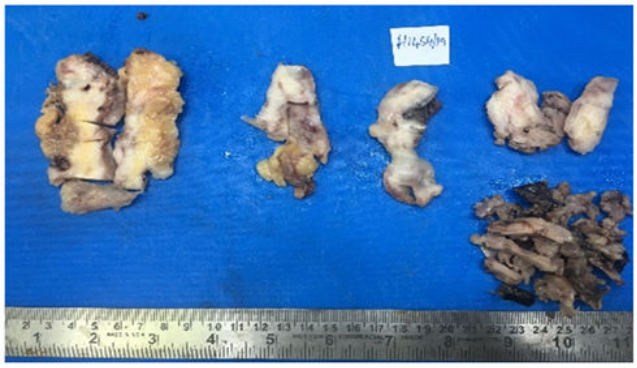

Figure 1: CT Imaging showed thymic lesion possibly Lymphoma. FNAC done was reported as Non-Hodgkins Lymphoma. Surgery of Thymectomy with debulking was done.

Microscopically, a neoplasm arranged in sheets and in perivascular pattern infiltrating into the surrounding fatty tissue [3]. The predominant neoplastic cells are small and round with scanty cytoplasm and dense nuclei. In some areas, the neoplastic cells are separated by fibrous strands. Occasional foci showing epithelial cells with eosinophilic cytoplasm and vesicular nuclei. Few areas of necrosis also seen (Figure 2).

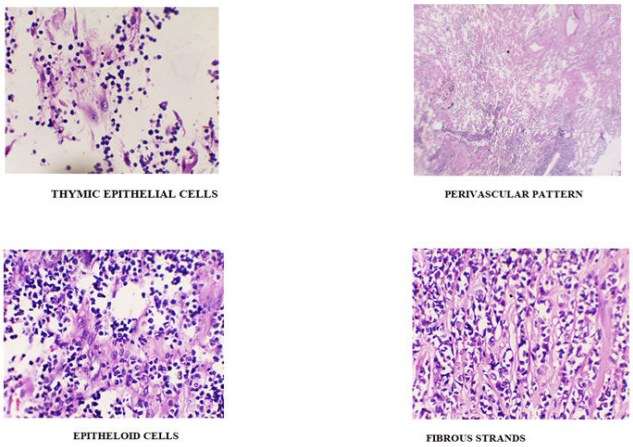

Figure 2: Immunohistochemistry done showed positivity for CD3 (T cell marker), CD 45 (Lymphoid cells), CD20, Pan CK (Focal nodular positivity) and Ki-67 (90% nuclear positivity). Pan CK showing focal nodular positivity thus confirms as thymoma. Impression given was Thymoma Type-B1 with infiltration into the mediastinal fat.

DISCUSSION

Thymoma type B1 is lymphocyte rich and predominantly cortical [4]. It is a tumour that resembles normal thymus. Low magnification: lobulated architecture with cellular lobules and intersecting fibrous bands; mostly partially encapsulated. High magnification: mixture of neoplastic epithelial cells of polygonal or spindle shape and non-

neoplastic lymphocytes. Might be almost entirely necrotic [5].

Type B1: Prominent medullary islands, scattered neoplastic cells.

Gross: Lobulated, Firm, Grey-tan, Often encapsulated, possibly with cystic necrosis and calcification.

Immunohistochemistry: Pan-CK positivity for thymic malignant epithelial cells.

CONCLUSION

Thymoma type B1 is lymphocyte rich, resembling normal functional thymus combining normal thymic cortical areas with those resembling thymic medulla. A delicate network of immunohistochemistry of Pan CK showing focal nodular positivity thus confirms as thymoma type-B1, as Pan CK is negative in lymphomas. So, the very close differential diagnosis of non-hodgkin's lymphoma can be ruled out.. Early diagnosis confirming histopathology with immunohistochemistry is mandatory for diagnosis of thymic tumours. This simplified approach to the reporting of thymic epithelial neoplasms offered here provides all of the pertinent information for our clinical colleagues, including the WHO subtype.

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