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THYMOMA B2 TYPE WITH MYASTHENIA GRAVIS - A RARE CASE REPORT

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ABSTRACT

Thymoma is a unique thymic epithelial neoplasm with indolent growth and rarely presents with local invasiveness and metastases. Thymomas have been reported to be associated with various parathymic syndromes, most commonly such as myasthenia gravis and pure red cell aplasia. Myasthenia Gravis is a disorder of abnormal neuromuscular transmission and is associated with thymoma about 20 - 25% of the cases. Here we presented 24 yr old female with a 4 months history of intermittent left-sided pleuritic-type chest pain and wheezing. She was a known case of Myasthenia gravis for past 2 yrs, under medication. On CT scan, chest shows multiple well defined isodense pleura based mass like to lesion of varying size involving the coastal diaphragmatic and mediastinal pleura surface of left lung with board base towards pleura with calcification, diagnosed to be neoplastic mesothelioma. Later on histopathological examination tissue showed predominantly lymphocytes and multiple foci composed of pale elongated cells having moderate eosinophilic cytoplasm in sheets with no evidence of necrosis/increased mitotic activity and finally we concluded as Thymoma-Type B2. This case was reported due to its rarity.

KEYWORDS: *Thymoma, B2 type, Myasthenia gravis, Mesothelioma neoplasm.*

INTRODUCTION

Thymomas are generally characterized by an indolent grown pattern and are locally invasive.[1] World Health Organization classified as Type A, B, B1, B2, B3 and for the

heterogeneous group of thymic carcinomas, collectively called Type C thymomas. Masaoka staging system is the surgical staging system of thymomas (stage 1, 2a, 2b, 3, 4a, 4b). Stage 1 is featured with macroscopically completely encapsulated, with no microscopic capsular invasion. Stage 2a shows macroscopic invasion into surrounding mediastinal fatty tissue or mediastinal pleura. Stage 2b shows microscopic invasion into the capsule. Stage 3 is featured with macroscopic invasion into surrounding organs. Stage 4a is featured with Pleural and pericardial dissemination. Stage 4b shows Lymphogenous or hematogenous metastases.[2,3]

CASE REPORT

A 24-year-old female presented with a 4 months history of intermittent left-sided pleuritic-type chest pain which was associated with a non-productive cough and wheezing. She was a known case of Myasthenia gravis for past 2 yrs, under medication. On Contrast-enhanced computed tomography of the chest shows multiple well defined isodense pleura based mass like to lesion of varying size involving the coastal diaphragmatic and mediastinal pleura surface of left lung with board base towards pleura with calcification, diagnosed to be neoplastic mesothelioma (Fig 1). Later, CT guided biopsy was preformed. On histopathological examination, gross four linear gray white soft tissue on aggregation measures 3.5cm to 2.5 cm in length. Microscopic examination showed multiple linear fragment shows predominantly lymphocytes and multiple foci composed of pale elongated cells having moderate eosinophilic cytoplasm in sheets (Fig 2a & 2b). No evidence of necrosis/increased mitotic activity and finally diagnosed as Thymoma- Type B2.

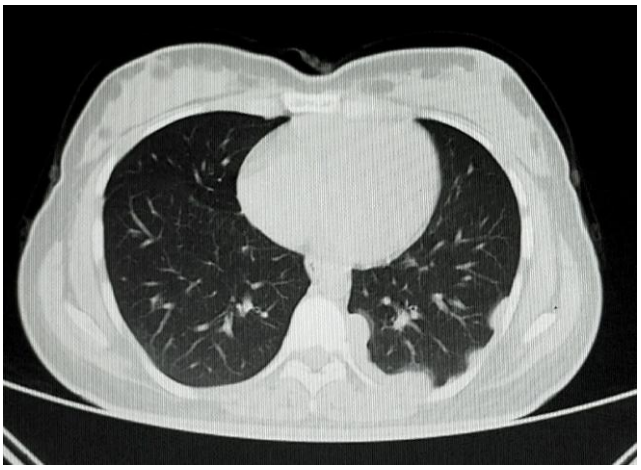

Figure 1.

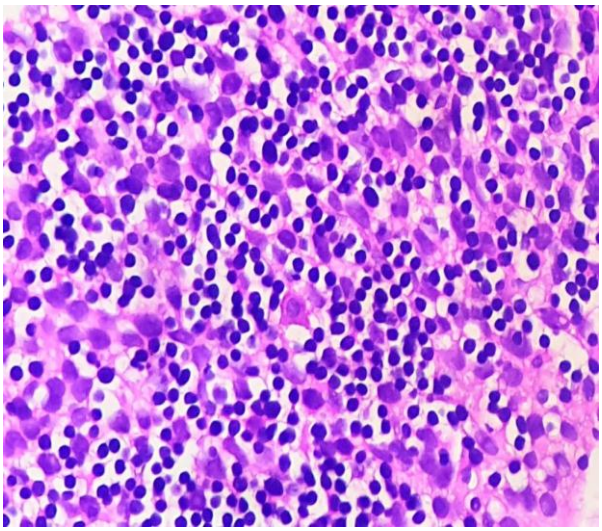

Figure 2a

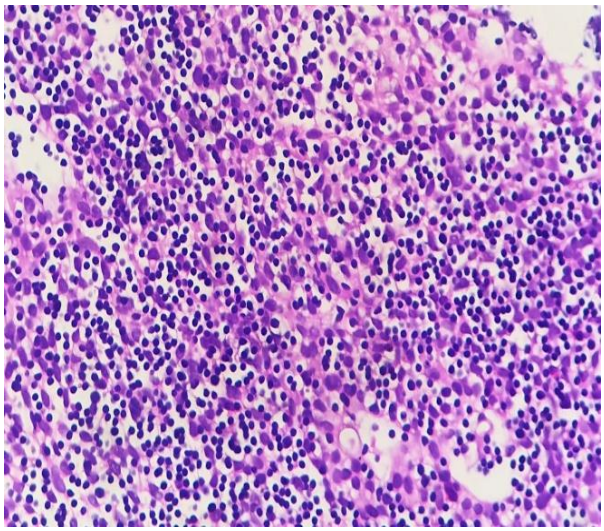

Figure 2b

DISCUSSION

Thymoma is a rare tumor which has a prevalence of 0.1 to 0.4/100,000. Thymoma is predominantly seen in the fourth or fifth decade of life.[1,2] Among the anterior mediastinum primary neoplasms, thymomas are the commonest. Radiological examination, presence of an anterior mediastinal mass along with myasthenia gravis strongly suggests a clinical diagnosis of Thymic tumor most commonly. Thymomas are classified according to the dominant cell type as epithelial, lymphocytic, mixed, or spindle-cell type.[10] Type B2 Thymoma usually present with either encapsulated or partially circumscribed tumors and have tendency to invade mediastinal fat and other organs. However, there are chances of recurrence of 5-10%. The difference between B1 and B2 depends on the size of the epithelial cells will be "larger and more numerous", and with no areas of "medullary" differentiation in type B2.[4,5] These types are associated with immune, endocrine disorders and the most common associations are with Myasthenia Gravis, Pure Red cell Aplasia and hypogammaglobulinemia.[5] Type B tumors are more invasive than type A tumors. Immunohistochemical markers is useful in differentiating of these neoplasms. Epithelial cells of thymomas show Keratin positivity while EMA negative. Lymphocytes of Immature T phenotype shows positive with CD1a, CD99 and CD3, CD5 for T cell.[4] For management , thymectomy indication for all cases of myasthenia gravis is controversial debate but thymectomy is indicated in all cases with thymomas no matter the stage of myasthenia gravis. Where as resection remains the main stay of the treatment, complete resection is not always possible and relapse may occur. The role of adjuvant radiotherapy to address the local disease and systemic chemotherapy is a standard for inoperable disease conditions.[11,12]

CONCLUSION

Thymomas have a relatively good outcome among all forms of malignant tumors with a 5-year survival rate of over 70 % and 10-year survival rate of over 50%.[10] The prognosis among subtypes within type B thymomas patients is based on Masaoka staging system, WHO classification systems and status of capsular integrity. On surgical management, thymectomy and debulking of the tumor is done and regular intravenous immunoglobulins combined with low-dose immunosuppression in addition to thymectomy appear to be safe when patients associated with Myasthenia gravis.

Conflict of Interest

There is no conflict of interest.

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Nil

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published.

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