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RESEARCH ARTICLE

"THYMOMA AS A NECK SWELLING - A SURGICAL DILEMMA"

Dr. Shifa A. Kalokhe, Dr. Shaunak Saha, Dr. Lisha Suraj and Dr. Sameer Kadam
Department of GeneralSurgery MGM Medical College, Navi Mumbai. MGM Institute of Health Sciences.

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Abstract

Thymomas are rare neoplasm of Anterior Mediastinum originating within the epithelial cells of the thymus and it is exceedingly uncommon in children and young adults, rises in incidence in middle age, and peaks in the seventh decade of life. One third to one half of patients present with an asymptomatic anterior mediastinal mass on chest radiograph, one third present with local symptoms (cough, chest pain, superior vena cava syndrome, and/or dysphagia), and one third of cases are detected during the evaluation of myasthenia gravis. Myasthenia gravis is a disease of the neuromuscular junction which causes progressive weakness of muscles. Indication of thymectomy for all cases of myasthenia gravis has been a topic of debate but thymectomy is indicated in all cases with thymomas no matter the stage of myasthenia gravis. We present a rare case of Thymoma as 70/Female patient presented with a painful lateral neck swelling on left side with Myasthenia Gravis and Dysphagia. We couldn't find any similar cases in literature. USG Neck was done which showed a 5.3x5.3x4.3cm multilobulated mass in left supraclavicular region inferior to left lobe of thyroid with calcification suspicious of malignancy which possible origin from Thyroid and Parathyroid Gland. On CECT scan there was 4.1x3.4x3.8 cm isodense mass which seems to be arising from lower pole of left thyroid lobe and extending in surrounding structures. FNAC was s/o Thymoma type A. Patient underwent Sternotomy- entire tumor along with thymus was dissected, however posteriorly it was densely adhered to Left Vagus Nerve Giving Suspicion of Neurofibroma. Specimen Sent for Frozen Section which confirmed it to be Type A thymoma. Histopathology Report concluded the diagnosis- Type A Thymoma. Post Operative was Uneventful. Thus, we conclude a rare case of Neck Swelling with series of event to reach to a Final Diagnosis of Thymoma.

Introduction:-

Thymomas are rare neoplasm of Anterior Mediastinum in adults and exceedingly uncommon in children and young adults, rises in incidence in middle age, and peaks in the seventh decade of life[1]. Based on cancer registry data, the overall incidence of thymoma in the U.S. is 0.13 per 100,000 person-years and Incidence of 0.15 cases per 1000,000 in India. Thymic abnormalities are prevalent in form of hyperplasia in 60%–70% and thymoma in 10%–15%; myasthenia gravis is present in 15–20% of thymoma patients [2,3]. Myasthenia gravis is a disease of the

Corresponding Author:- Dr. Shifa A. Kalokhe
Address:- Department of GeneralSurgery MGM Medical College, Navi Mumbai MGM Institute of Health Sciences.

neuromuscular junction which causes progressive weakness of muscles [2]. Indication of thymectomy for all cases of myasthenia gravis has been a topic of debate but thymectomy is indicated in all cases with thymomas no matter the stage of myasthenia gravis [2,4]

There are very few cases reported for thymoma in myasthenia gravis patient. This case is unique because the patient was referred from outside hospital as a parathyroid carcinoma with myasthenia gravis with no midline swelling instead, she presented with a left sided neck swelling with Dysphagia.. This work is reported in accordance with SCARE Criteria [5].

Case Report:-

A 70-year lady was referred to our OPD with complaints of Swelling in Left side of neck since 2 months and dysphagia since 1 month. The swelling was insidious in onset, progressive and associated with dull aching pain. There was associated H/O dysphagia since 1 month, more for solids. No other complaints of difficulty in breathing, weight loss, cough or fever. Patient was diagnosed with Myaesthenia Gravis by the referring hospital and started on Tab. Neostigmine since 10yrs.She was diagnosed as a case of Parathyroid carcinoma, However On examination there was a palpable mild tender swelling measuring 3x3 cm present over left side of neck, smooth surface, margins-not well defined, soft in consistency.

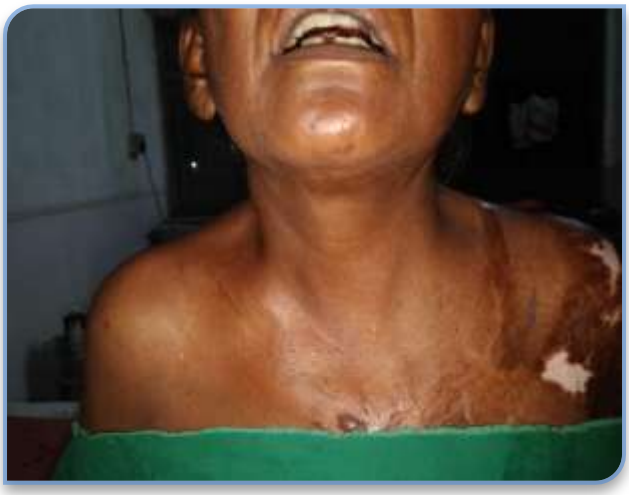

Fig 1a:- Anterior View of Neck.

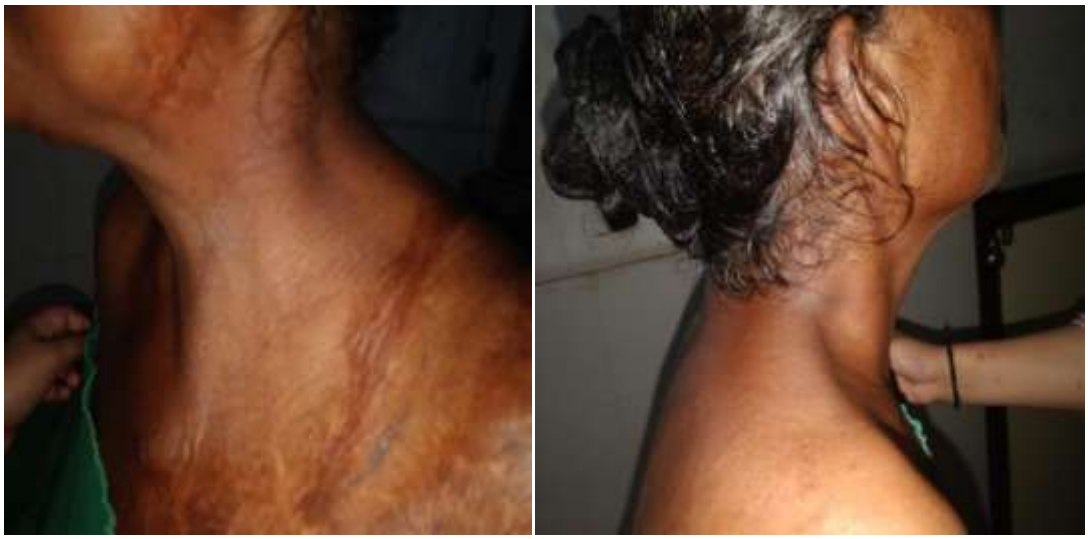

Fig 1b:- Lateral View of Neck.

On Investigation: USG Neck was done which showed a 5.3*5.3*4.3cm multilobulated mass in left supraclavicular region inferior to left lobe of thyroid with calcification s/o malignancy which could be Thyroid or Parathyroid Carcinoma

On CT scan there was 4.1x3.4x3.8 cm isodense mass which seems to be arising from lower pole of left thyroid lobe, with retrosternal extension and medially pushing the trachea and oesophagus to right and laterally indenting the medial third of clavicle, anteriorly involving the strap muscle and posteriorly having mass effect on carotid artery and jugular vein.

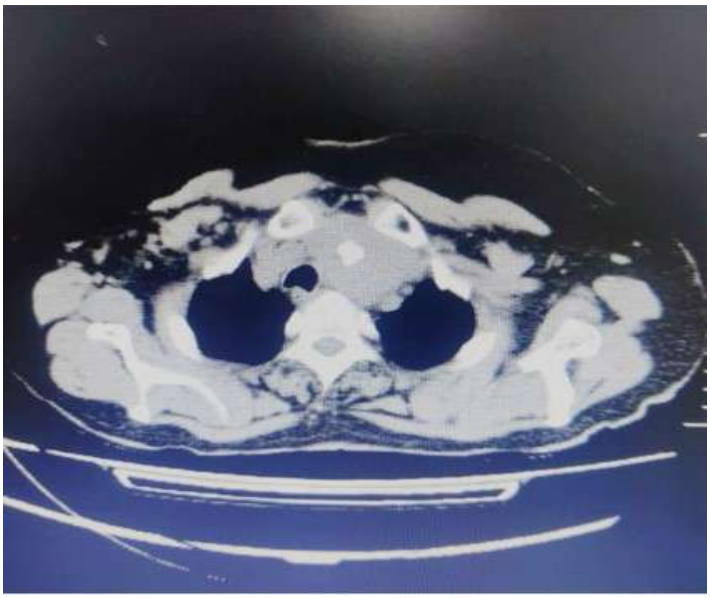

Fig 2:- CECT Neck showing well defined density lesion with central focus of calcification.

FNAC was s/o Thymoma Type A.

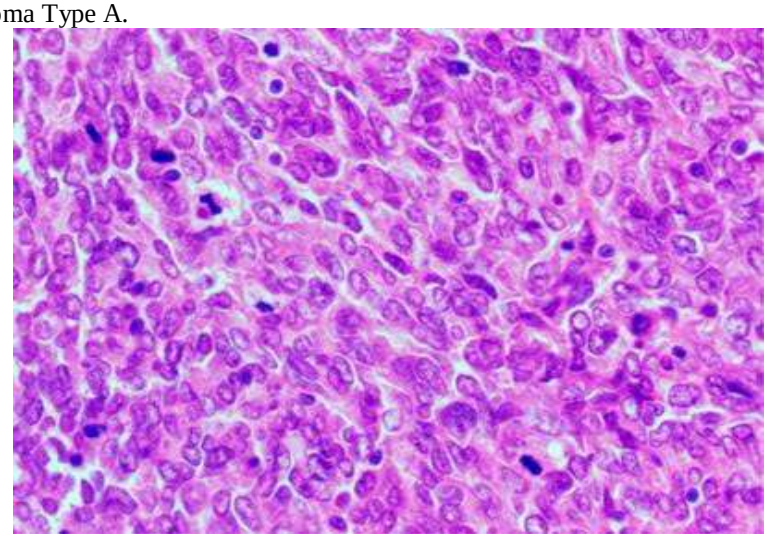

Fig 3:- Histopathology showing bland appearing cells with oval nuclei, occasionally small lymphocyte.

Intraoperatively there was a Hard swelling measuring 5*4*2 cm in left supraclavicular area in close proximity to left thyroid lobe inferior portion but not arising from thyroid, inferiorly it was extending retrosternally for which open sternotomy was done. Entire tumour along with thymus was dissected and excised with simultaneous identification and preservation of important neurovascular structure, Posteriorly it was seen densely adhered to left Vagus Nerve left which made it appear like a neurofibroma and thus Sample was sent for Frozen section- s/o Type A Thymoma. No evidence of Localized enlarged Lymph Node with normal Thymus in Upper Mediastinum.

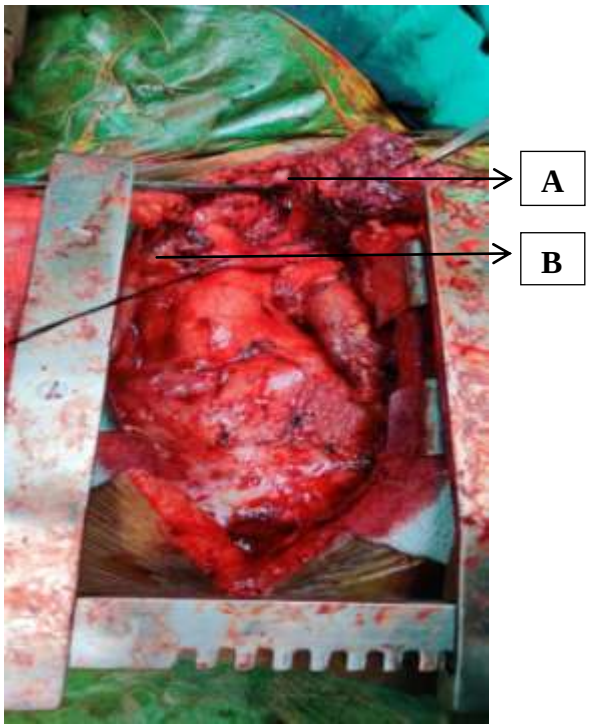

Fig 4:- Intraoperative Finding
A- Thymoma
B- Subclavian Vein

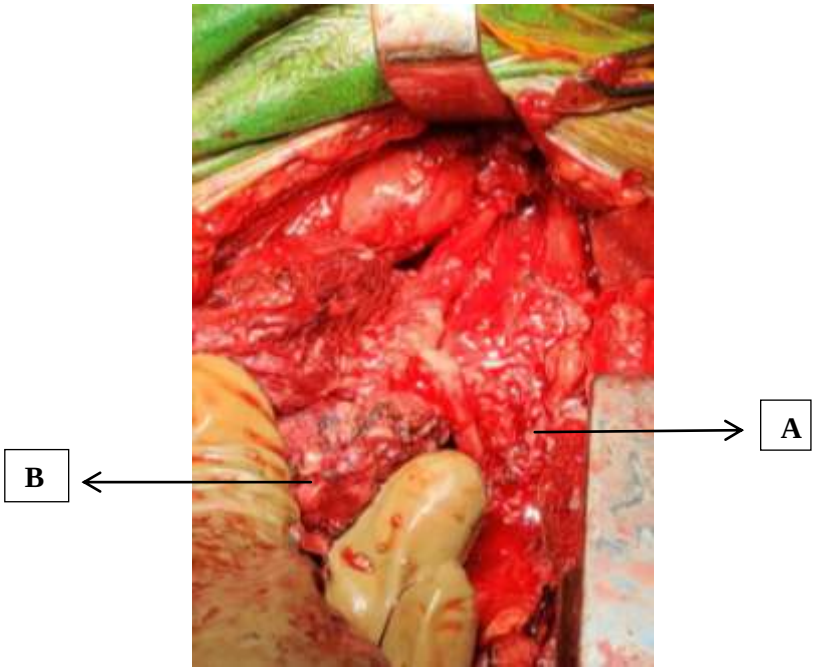

Fig 5:- Intraoperative Findings.
A- Thymoma
B- Subclavian Vein

Post Operative patient was extubated on POD1 and rest was uneventful HPE report s/o Type A Thymoma

Fig 6:- Excised Thymic Mass.

Discussion:-

Indication of thymectomy for all cases of myasthenia gravis has been a topic of debate but thymectomy is indicated in all cases with thymomas no matter the stage of myasthenia gravis [2,4] present in the fourth and fifth decades of life, although cases have been reported within the first year and well into the ninth decade [6,7]. One third to one half of patients present with an asymptomatic anterior mediastinal mass on chest radiograph, one third present with local symptoms (eg, cough, chest pain, superior vena cava syndrome, and/or dysphagia), and one third of cases are detected during the evaluation of myasthenia gravis.[8]

Generally, thymoma is classified histologically into three types based on the predominant cell type: lymphocytic, epithelial, and lymphoepithelial (mixed).

According to WHO classification it is classified as Type A-15 Year survival rate of 90%, Type AB thymoma-15 Year survival rate of 90%, Type AB thymoma-5 and 10-Year Survival Rate of 95% and 90%, Type B2 thymoma-15Year Survival Rate of 60%, Type B3 thymoma-40% of people with this type live at least 20 years after diagnosis.

The most commonly associated condition with thymoma is myasthenia gravis, an autoimmune disease of the nerve-muscle junction that can manifest as weakness, fatigue, double vision, ptosis[9]. Approximately 10% to 15% of patients with MG will have thymoma Since Blalock's first case, thymectomy has become an increasingly accepted procedure in the treatment of myasthenia gravis [10]. Management for thymoma is done with multimodality diagnosis and treatment strategies, surgery i.e Thymectomy is the standard of care [8,11]. Open surgery with median sternotomy is the mainstay approach to Thymectomy [12]. Thymectomy poses surgical difficulty due to close proximity with vital structures like pericardium, great vessels, phrenic nerve and lungs. Hence meticulous dissection and minimal use of electrocautery near phrenic nerve area with adequate hemostasis is necessary [13]. For better prognosis after thymectomy, en-bloc resection of the entire thymus with surrounding tissue in pre-vascular plane of anterior mediastinum between phrenic nerves is done [14].

Conclusion:-

Thymoma is a common Cause of Anterior Mediastinal Swelling. Rarely the same may present with Neck swelling which further confuses the Diagnosis with Thyroid Swelling

Most common associated condition of thymoma is Myasthenia Gravis which requires simultaneous management with Neostigmine. Management of Thymoma is always Excision with Thymectomy which has good outcome. Early Diagnosis, Stabilization and Definitive Surgery is Important to Differentiate between Thymoma, Thymic Hyperplasia and Thymic Carcinoma.

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