Primary Malignant Melanoma of the Mediastinum

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Abstract
Primary malignant melanoma of mediastinum is extremely rare. Skin is the most common site for primary melanoma. However, it can occur at other sites like eye, oronasal mucosa and anorectal junction where melanin cells reside. Literature reveals primary melanomas in the oral cavity, oesophagus, gall bladder, uterus, genitourinary tract, meninges and thorax.

We present a case report of a 32 years woman who presented with an anterior mediastinal melanoma.

INTRODUCTION
Malignant melanoma is an uncommon neoplasm accounting for approximately 1.5% of all cancers and arises from preexisting nevus in about 40% of cases. Most occur in older patients, head and neck being the most common site in one-third cases.

There are rare reports of primary melanoma of the chest in English Literature. Malignant melanoma of posterior mediastinum arising from the sympathetic chain and primary melanoma in the anterior mediastinum have also been reported.

CASE REPORT
Thirty two years female was admitted to hospital because of swelling of face and neck, weight loss and difficulty in swallowing.

On examination, there was a diffuse left sided neck swelling with visible dilatation of left external jugular vein and fullness in left supra-clavicular fossa.

CT scan showed a large anterior and superior mediastinal mass, 12 X 9 cms in size, partly encasing and displacing the aortic arch and its major branches. The mass extended into the right lung field and hilum. Superior vena cava and trachea were markedly compressed. Clinical impression was thymoma. Debulking of the mass was done.

Thoracotomy specimen was received in multiple tissue bits which were partly nodular, soft to firm, grayish-white with blackish discoloration and totally measuring 10 x 12 cms.

Light microscopy revealed a tumor arranged in lobules, separated by vascularized fibrocollagenous septae. Individual tumor cells were round to oval to spindly having vesicular, pleomorphic nuclei and prominent nucleoli (Fig. 1). The cytoplasm was moderate in amount, eosinophilic and vacuolated at places with intracellular and extracellular brownish pigment at places (Fig. 2). Some areas showed compact sheets of bizarre cells with abnormal mitotic figures.

Fig. 1 : Large polygonal tumor cells with pleomorphic vesicular nuclei and prominent nucleoli. (H & E X 400)

Fig. 2 : Tumor showing intra and extra-cellular brownish pigment (H & E X 200)
Paraffin sections were stained for Prussian blue reaction and treated for melanin bleach and formalin bleach, which favoured the presence of melanin pigment. Immunohistochemistry revealed reactivity with HMB45 and S-100 protein.

**DISCUSSION**

There are case reports of malignant melanoma arising in the mediastinum. There is evidence that these tumors arise in the sympathetic chain in the posterior mediastinum and from nevus cell aggregates in mediastinal lymph-nodes in the anterior mediastinum. There is some question, in fact, as to the existence of a true primary visceral melanoma. Cutaneous melanomas may spontaneously regress leaving only the metastatic lesion masking as a primary lesion. In a study of 2446 patients with malignant melanoma, 4% had an unknown primary site despite careful evaluation. About 3-4% of melanomas present as a secondary without evidence of a known primary. First such case was described in 1953 by Sumner. The possible explanations for primary melanoma occurring in the mediastinum are: Ectopic nevus cells are present in the lymph nodes which may undergo malignant change, primary melanoma of the anterior mediastinum may have a histogenetic relation with the recently described aggregates of nevus cells in the thymus or mediastinal lymph nodes, primary melanoma in the lung is possibly due to in-utero migration of melanocytes with the rest of the embryonic respiratory tract from the primitive forugut, and/or Sympathetic chain is the site of origin of posterior mediastinal malignant melanoma.

We report this case as a primary melanoma of the mediastinum because in spite of a thorough clinical evaluation, there was no evidence of a primary pigmented lesion on the skin or at any other site.

**REFERENCES**


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**Announcement**

The office bearers of Association of Physicians of India, Kolhapur Branch for the year 2004-2005.

Chairman : V Hirani
Vice Chairman : A Joshi
Hon. Secretary : N Rathod
Treasurer : V Kripalani
Joint Secretary : A Arage

**Announcement**

Symposium on ‘Hepatitis E Virus : Epidemiology, Virology and Control of An Emerging Pathogen 18th to 19th February 2005, New Delhi. The program will cover epidemiological, clinical and basic science aspects of hepatitis E virus infection.

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