Case Report

Sarcomatoid (spindle cell) carcinoma of the cricopharynx presenting as dysphagia

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Abstract:
Spindle cell carcinoma is a highly malignant variant of squamous cell carcinoma. It is considered to be a biphasic tumour composed of squamous cell carcinoma (in situ or invasive) with a spindle cell carcinoma (with sarcomatous component). It is more common in males. We are presenting a rare case of spindle cell carcinoma in an 82 year old female who presented with dysphagia. Laryngoscopic examination showed a polypoid growth in hypopharynx. On histopathological and immunohistochemical study it was confirmed as spindle cell carcinoma of hypopharynx. It is challenging to diagnose spindle cell carcinoma because of overlapping histopathological features with various other spindle cell tumours. We are presenting this case for its rarity, clinical, histomorphological and immunohistochemical features.
Key words: Pharyngeal neoplasm, Spindle cell tumour, Sarcomatoid squamous carcinoma

Introduction:

Spindle cell carcinoma is a rare malignancy of head and neck region. It is most commonly reported in larynx, but has also been reported at other mucosal sites such as gingival, tongue, hypopharynx and nasal cavity.[1, 2] The term spindle cell carcinoma is a biphasic tumour composed of either insitu or invasive squamous cell carcinoma and a malignant spindle cell component with a mesenchymal appearance, but of epithelial origin.[3] The following is a case report of one such type of malignancy in a patient who presented to our institute.

Case report:

A 82 year old female presented to the ENT department of our hospital with complaints of dysphagia for 6 months. Dysphagia was initially only for solids which gradually developed for liquids also. Patient was a chronic mishri(powdered tobacco) user since 40 years. Clinical examination did not reveal any palpable cervical lymphadenopathy. On laryngoscopy , a polypoidal growth with surface ulceration arising from the right anterolateral wall of the cricopharynx was noted(Figure1). Laryngoscopic biopsy was taken and sent for histopathological examination.

Histopathological examination showed a polypoid mass lined by dysplastic squamous epithelium with extensive areas of surface ulceration (Figure 2) and foci of invasion (Figure 3). The deeper tissue showed a tumour composed of spindle cells arranged in small

sheets, fascicles and irregularly (Figure 4). The tumour cells were elongated spindle cells having pleomorphic hyperchromatic nuclei and scant to moderate amount of eosinophilic cytoplasm. Variable number of polygonal ovoid cells having round vesicular nuclei and ample amount of cytoplasm were noted. Stroma showed moderate diffuse mononuclear cell infiltrate.

On histopathological examination diagnosis of malignant spindle cell tumour suggestive of ?spindle cell carcinoma, ?fibrosarcoma,? inflammatory myofibroblastic tumour was given and immunohistochemistry was advised. On immunohistochemistry tumour showed positivity for EMA, cytokeratin, SMA, Desmin, CD 34 and S-100 protein. Final diagnosis of spindle cell carcinoma was given after histopathological and immunohistochemical study. There was no nodal involvement noted after extensive clinical and radiological investigations. According to the TNM staging, patient was placed into T1N0M0 stageI. Patient underwent surgical excision and adjuvant radiotherapy. On follow up patient is disease free.

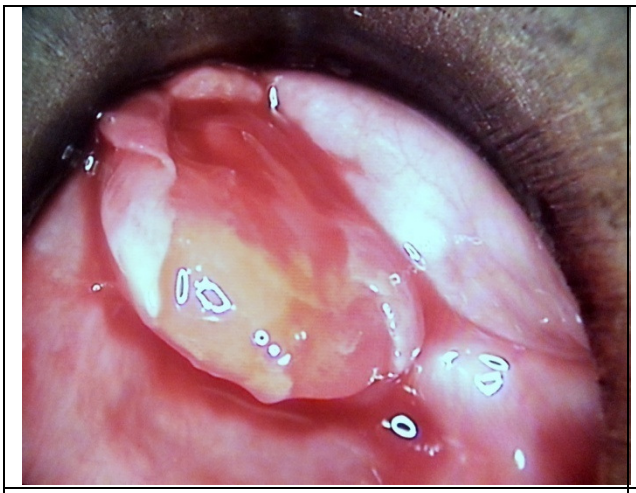

Figure 1. Laryngoscopy showing polypoid growth

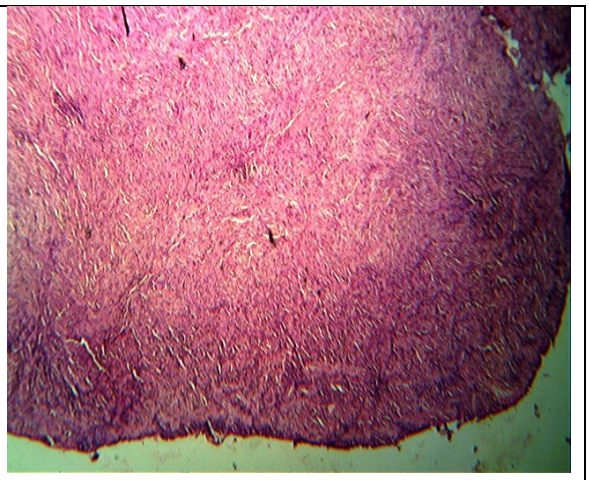

Figure 2. Photomicrograph showing a polypoid lesion with surface ulceration
(H& E stain, 40x).

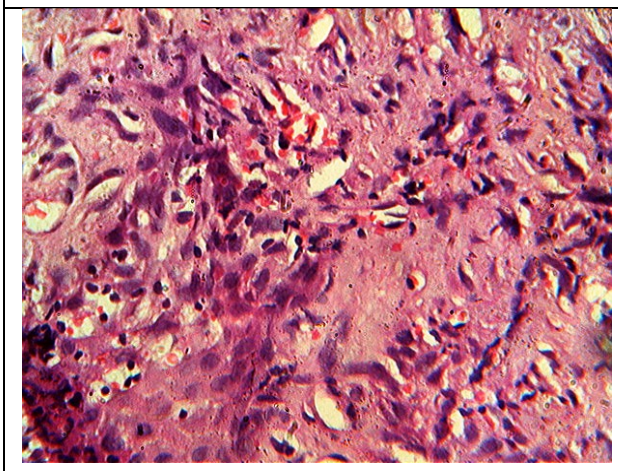

Figure 3. Photomicrograph showing focus of invasive squamous cell carcinoma admixed with spindle cell component.
(H& E stain, 400x)

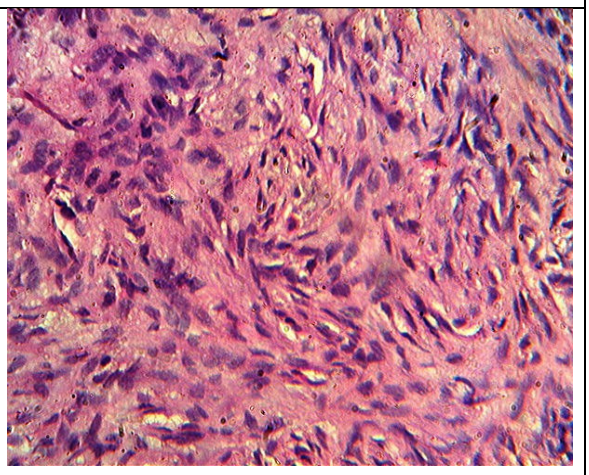

Figure 3. Photomicrograph showing biphasic tumour cells arranged in fascicles and irregularly. (H& E stain, 400x)

Discussion:

Spindle cell carcinoma also known as sarcomatoid carcinoma is a rare malignancy of head and neck region. Most frequently reported site of spindle cell carcinoma in head and neck region is larynx.[4] It is also noted in nasal cavity, hypopharynx, oral cavity, oesophagus, trachea, skin and breast.[1, 2] Spindle cell carcinoma is predominantly noted in males and most commonly between 5th to 7th decade of life with reported M: F ratio 10:1.[5,6] Exact cause of spindle cell carcinoma is not known, but strongly associated risk factors include history of cigarette smoking, alcohol abuse and irradiation.[7] In our case patient was 82 year old female, who was chronic mishri(powdered tobacco) user. Clinically most of the patients present with the signs and symptoms of hoarseness of voice, dyspnoea, cough and dysphagia of less than 1 year duration.

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Clinically & grossly these tumours present as polypoid growth[5]The microscopic features of spindle cell carcinoma includes the presence of two distinct epithelial derived components (a carcinomatous component and a spindle cell component).[3] Major portion of the tumour mass is formed by the sarcomatoid component present in fasciculated pattern, similar findings were noted in this case. The squamous component may be represented by insitu or invasive carcinoma where as spindle cell(sarcomatoid) component may assume various pattern , most common being pleomorphic.[6]

On histopathology, other conditions having spindle cell component to be ruled out are reactive and benign spindle cell proliferation, nodular fasciitis, low grade myofibroblastic sarcoma and rarely fibrous histiocytoma.

Immunohistochemical study on tumour cells showed positivity for EMA, cytokeratin, SMA, Desmin, CD 34 and S-100 protein which was in concordance with other studies.[8, 9]Prognostic features include evidence of distant metastasis, depth of tumour along with the polypoid configuration of the tumour.[3] In our case growth was detected in early stage and was limited to hypopharynx with no nodal involvement and no distant metastasis. Tumour was stage I [T1N0M0] (According to TNM classification of the American Joint Committee on cancer staging) . Patient underwent surgical excision and adjuvant radiotherapy. On follow up patient is doing well and is disease free.

Conclusion:

Spindle cell carcinoma of the pharynx is an uncommon, highly malignant variant of squamous cell carcinoma. It is very important for clinicians to be aware of this type of neoplasm to ensure early detection and management, as these tumours show better prognosis.

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