DOI: 10.7860/JCDR/2016/17174.7758

Case Report

Oncology Section

Carcinosarcoma of the Larynx- A Rare Site Entity

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ABSTRACT

Carcinosarcoma is a very rare lesion reported in many organs including larynx. The larynx appears to be highly unusual site, only a few cases have been described in the literature. Carcinosarcoma is a mixed tumour. It is composed of both malignant epithelial and mesenchymal elements. We report a case of Carcinosarcoma of the larynx in 45-year-old male. He presented with complaints of hoarseness of voice, difficulty in breathing and swallowing. The growth was pedenculated arising from left vocal cord. Diagnosis was confirmed by histopathology.

Keywords: Carcinoma, Mesenchyme, Sarcoma

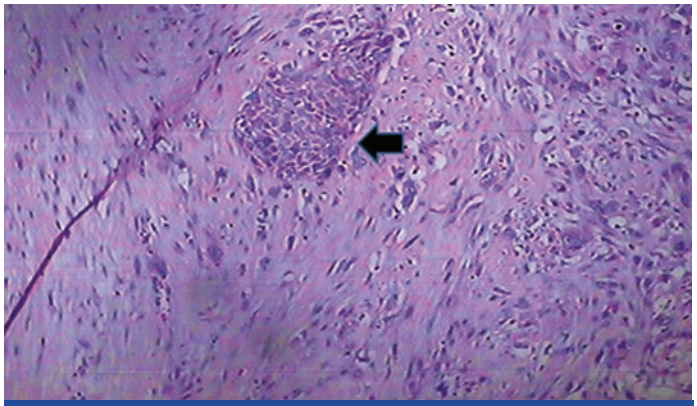
CASE REPORT

A 45-year-old male patient came to ENT OP department with complaints of hoarseness of voice, difficulty in swallowing and breathing for 6 months. History of smoking and alcoholism were present since 10 years duration. He had no significant medical complaints. Basic Haematological investigations, liver function tests and renal function tests were normal. Indirect laryngoscopic examination revealed polypoid pedunculated mass arising from left vocal cord and excised specimen was sent to pathology department in 10% formalin for histopathologic examination. Macroscopic findings showed single white soft tissue mass measuring 2.5x1x0.5cm [Table/Fig-1]. External surface was nodular and cut section showed grey white appearance. Differential diagnosis considered were vocal cord nodule, solitary fibrous tumour, squamous cell carcinoma. Microscopy of the lesion showed polypoidal lesion with ulcerated surface and composed of pleomorphic spindle shaped cells having oval elongated hyperchromatic to vesicular nuclei of varying sizes with prominent nuclei. Multinucleated and mono nucleated tumour giant cells were noted. Few foci showed islands of pleomorphic epithelial cells. There were nests of carcinomatous cells in a sarcomatous back ground [Table/Fig-2]. Sarcomatous cells were arranged at places in hering bone pattern [Table/Fig-3]. Postoperative state was uneventful and three months follow up of the case showed good recovery.

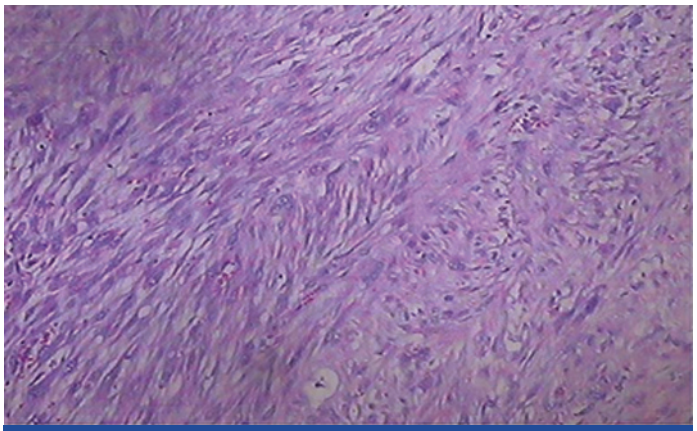
[Table/Fig-1]: Gross picture shows grey white soft tissue mass measuring 3.5×2×0.5cms. Cut section grey white.

DISCUSSION

Carcinosarcoma is a malignant tumour composed of both malignant epithelial and mesenchymal components. Less than 1% of all malignant tumours of larynx and hypopharynx are represented by carcinosarcoma [1]. Not only carcinosarcoma is rare in larynx, but also other mesenchymal tumours are very uncommon. The larynx carcinosarcoma classically presents clinically as dyspnea and dysphonea due to laryngeal obstruction [2].



[Table/Fig-2]: Nests of carcinomatous cells in sarcomatous background. (H & E 100)



[Table/Fig-3]: Sarcomatous cells arranged in herring bone pattern. (H & E × 100)

In 1865 the term carcinosarcoma was coined by Virchow for the rare neoplasm of squamous and sarcomatoid cell types. Since then various authors called it as pseudosarcoma, spindle cell carcinoma and sarcomatoid carcinoma. It is a mixed type of tumour with a combination of carcinomatous and sarcomatous cell types. This is found in cancers of uterus, vagina, lungs, oral cavity, urinary tractesophagus and rarely respiratory tract [3,4]. There is controversy about histogenesis of the tumour. The proposed hypothesis regarding histogenesis of carcinosarcoma are a carcinoma with reactive mesenchymal components, a tumour with simultaneously and independently developing carcinoma and sarcoma, embryonic and mesenchymal residual tissue giving origin to this type of tumour and finally a totipotent malignant cells leading to genesis of malignancy [5-7]. Among all possibilities the most accepted theory is the differentiation of primitive blastic mesenchymal cells that have potential to mature and produce malignant neoplasm of multiple differentiation. The laryngeal carcinosarcoma has similar clinical presentation like other laryngeal carcinomas [8]. Carcinosarcoma of larynx can be differentiated from polypoid lesions like vocal cord nodule, solitary fibrous tumour and malignant lesion like squamous cell carcinoma by histopathology. Vocal cord nodule is mainly seen in adults who are heavy smokers and also individuals subjected to vocal abuse. Macroscopically the lesion is, < 1cm in diameter, rounded; smooth usually sessile and polypoid swelling on true vocal cords. Microscopic features of vocal nodule shows intact surface epithelium and subepithelial tissue contains fibrous tissue, proliferating blood vessels and edematous, hyalinised stroma. Solitary fibrous tumour of the larynx usually presents at the age of 42 years in men. Patients are mostly non smokers and develop hoarseness of voice, progressively foreign body sensation and cough [9]. Microscopically it is a well circumscribed tumour composed of spindle cells with vesicular nuclei arranged in short fascicles and also storiform pattern of cells, hyalinization, myxoid changes and branching vascular channels are present. Strong cytoplasmic positivity of the cells for vimentin, CD34, and bcl-2 was shown, immune-histochemically whiledesmin, actin and S100 were negative.

Laryngeal squamous cell carcinoma most often in the sixth to seventh decades. Men are frequently affected than women. Microscopic features of squamous cell carcinoma shows tissue with sheets of pleomorphic squamous epithelial cells infiltrating the stroma. The tumour cells have round to oval nuclei with prominent nucleoli and with abundant eosinophilic cytoplasm. Keratin pearls can also be seen [10].

The microscopic features of carcinosarcoma show malignant epithelial and stromal components. Both components are admixed. On immunohistochemistry, epithelial component is positive to cytokeratin, and mesenchmal component is positive to vimentin positivity for other markers like S-100, action, desmin etc. depends on tumour cell origin. Most of the cases of laryngeal carcinosarcoma have been treated with laryngectomy. The prognosis of carcinosarcoma is also controversial and it is reported to be worse than that of squamous cell laryngeal carcinoma [5]. Review of literature showed only a few cases of carcinosarcoma [11]. Carcinosarcoma is rare tumour and its presentation in respiratory tract is even rare. We report the case due to its rarity of presentation in the larynx.

CONCLUSION

Carcinosarcoma of larynx should be differentiated from other benign polypoidal lesions occurring in larynx. Histopathological examination with H&E stain is sufficient for the confirmatory diagnosis. Carcinosarcoma of larynx has better prognosis when compared with carcinosarcomas occurring in other regions.

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FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **Oct 05, 2015**
Date of Peer Review: **Nov 06, 2015**
Date of Acceptance: **Feb 24, 2016**
Date of Publishing: **May 01, 2016**