Spindle cell carcinoma (Sarcomatoid carcinomas) of Head and neck: A Case Series

Vikas Warikoo[1], Krunal Solanki[2], Kiran C Kothari[3]
Mahesh H Patel[4], Dinesh Sharma[5]

ABSTRACT

Spindle cell carcinoma of head and neck, a subtype of squamous cell carcinoma is a unique and rare neoplasm, composed of both malignant epithelial and mesenchymal components. A series of 10 patients with Spindle cell carcinoma is presented, along with an analysis of potential prognostic factors, outcome following treatment, and patterns of failure. Details of patients were reviewed from hospital records of surgical, radiotherapy and pathology departments.

Keywords: Head, Neck, Spindle Cell Carcinoma, Squamous Cell

[1, 5] Resident Mch, Onco, [3]Professor, [4]Associate Professor, Gujarat Cancer Research Institute, Ahmedabad, Gujarat (India)

[2]Assistant Professor, Dept. Surgery AMCMET Medical College, Ahmedabad. Gujarat (India)

Corresponding author email: krunal2526@gmail.com

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INTRODUCTION: Spindle cell carcinoma of head and neck, a subtype of squamous cell carcinoma[1] is a unique and rare neoplasm, composed of both malignant epithelial and mesenchymal components. It has a more aggressive behaviour as compared to classical squamous cell carcinoma warranting surgical interventions with wider surgical margins.

OBJECTIVE: Contribute in part to the better understanding and awareness of this malignancy in regard to diagnosis, optimum treatment, and prognosis of Spindle cell carcinoma of upper aero digestive tract.

METHODOLOGY: A series of 10 patients with Spindle cell carcinoma is presented, along with an analysis of potential prognostic factors, outcome following treatment, and patterns of failure. Details of patients were reviewed from hospital records of surgical, radiotherapy and pathology departments. Patient evaluation consisted of history, physical examination, Computed tomographic scan of head and neck, chest x ray, endoscopic examination and biopsy. Various parameters like age, gender, site of tumour, primary modality of treatment, adjuvant treatment, recurrence and survival were considered. All reports with spindle cell differentiation on

histopathology were sent for immunohistochemistry forAE1, Vimentin and EpithelialMembraneAntigen (EMA) markers.

RESULTS: Total of 10 patients was considered. Patients were in the age group of 34 to 66 years. Out of these 9 were males and one female. Six out of 10 patients had primary lesion in the oral cavity, two in oropharynx and two in the larynx. Six patients underwent upfront surgery, one patient had partial response to neoadjuvant chemotherapy and subsequently underwent surgery and three patients received radiotherapy up to dose of 66 - 70 Gy in fractions for a period of 5 to 7 weeks as the primary treatment. In chemotherapy mostly used multi drug regime with Cisplatin, Carboplatin and 5 fluorouracil.

Two patients out of seven patients who underwent surgery had microscopic positive surgical margins. In both these patients complete re-excision of surgical margin was done. All the seven patients who underwent surgery received adjuvant treatment, out of which six patients received adjuvant radiotherapy and one patient received adjuvant chemoradiotherapy. There were three recurrences in the series, two after radiotherapy and one after surgery. These patients were referred for palliative chemotherapy and all died in the course of 1 year from the time of diagnosis. Two patients were lost to follow up after their primary treatment. Remaining patients i.e. five patients are still following up and are disease free. The longest follow up in the series is 36 months and the shortest follow up is 5months.

DISCUSSION

Spindle cell carcinoma, a subtype of squamous cell carcinoma is a unique and rare neoplasm accounting for about 3% of squamous cell carcinoma and is composed of both malignant epithelial and mesenchymal components. It designates a rare variant growth pattern of squamous cell carcinoma in which the spindle epithelial cell resembles a sarcoma on histological examination. The initial description of this type of entity was given by Virchow in 1864. It is also known as pseudosarcoma, carcinosarcoma, sarcomatoid squamous cell carcinoma or polypoid squamous cell carcinoma. It is usually present as a large polypoid, pedunculated neoplasm, protruding from the mucosal surface with ulceration. Spindle cell carcinoma is most commonly seen in the head and neck region. Most cases in the head and neck arise in the oral cavity, larynx, tonsil and pharynx.

However, it may occur in other sites of body also. Symptoms vary according to the site. The mean age of appearance is the sixth decades of life and it has a male predominance. The predisposing factors are the same as squamous cell carcinoma, including tobacco use, alcohol abuse, poor oral hygiene and previous irradiation to the site in which the tumor arise.

This study is in consensus with other studies of Bataskis[2], Berthlet et al[3], Gorsky et al[4] etc . Surgery appears superior to radiotherapy in management of primary disease, irradiation constitutes an acceptable alternative for inoperable patients or those with sinonasal tumours. It also indicates the benefit of adjuvant radiotherapy in cases of advanced disease , with positive surgicalmargins and patients with nodal metastasis. Prognosis of the disease is generally poor and distant metastases are more often than conventional squamous cell carcinoma. It poses a diagnostic dilemma when confronted with malignant tumor with spindle cell morphology in the head and neck region and it's more aggressive behavior as compared to classical squamous cell carcinoma warrants surgical interventions with wider surgicalmargins[5,6,7].

Figure 1. Intraoral examination shows a growth in the lower alveolus involving lower buccal sulcus and mucosa (Histopathology showed spindle cell carcinoma) Histopathology
and Immunohistochemistry

Figure 2. Immunohistochemical staining showing tumor cells are positive for CK.

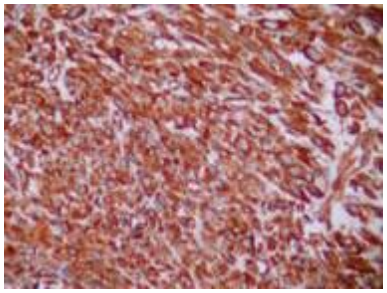

Figure 3. Immunohistochemical staining showing tumor cells are positive for vimentin.

Oral cavity is the commonest site in our patients. Prognosis is poor and distant metastasis more frequent in Spindle cell carcinomas then the conventional SCC. Surgery can be considered superior to radiotherapy as primary treatment;

Irradiation constitutes an acceptable alternative for inoperable patients. We emphasize on the role of re-excision in patients with positive surgical margins with role of adjuvant irradiation in advanced cases.

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