

Case Report

“Spindle Cell Squamous Cell Carcinoma with Unique Presentation in a Middle Aged Indian Man: A Case Report”

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Abstract: Spindle cell squamous cell carcinoma is a rare poorly differentiated variant of Squamous cell carcinoma composed predominantly of spindled tumour cells with partial or complete loss of morphological squamous cell differentiation which has to be differentiated from other spindle cell tumours like atypical fibromyxoxanthoma, superficial undifferentiated pleomorphic sarcoma and spindle cell melanomas. Here we present a case report of a unique presentation of spindle cell squamous cell carcinoma in a middle aged Indian man.

Keywords: Spindle cell carcinoma, squamous cell carcinoma.

INTRODUCTION

Cutaneous squamous cell carcinoma is a malignancy of epidermal keratinocytes that exhibits various degrees of differentiation that partially recapitulate the cytology of squamous cells of the epidermal stratum spinosum. Of which, spindle cell carcinoma is a rare variant of poorly differentiated squamous cell carcinoma seen most commonly in elderly white men and rarely in asian population, presenting as an exophytic plaque or nodule with rapid tumour growth and poor prognosis.

Case Report

A 43 year old male, presented with skin lesion for past 6 months.. On examination, the skin lesion was measuring, 10 x 7 cm, indurated with blackish discolouration (Fig. A & B). With a provisional diagnosis of soft tissue tumour, he underwent a wide local excision. Cut section showed a grey white multi nodular mass with areas of haemorrhage and necrosis measuring 3 x 3.5 x 3 cm which was extending from the skin.



Fig: A



Fig: B

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Journal homepage:

<http://www.easpublisher.com/easims/>

Article History

Received: 25.11.2019

Accepted: 06.12.2019

Published: 19.12.2019

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Microscopically, dermis showed an infiltrating neoplasm composed of cells arranged in nests and cords. Individual cells were round to spindle with moderate eosinophilic cytoplasm, elongated nucleus with few cells showing inclusion like nucleoli, and a few giant cells. Stroma showed areas of inflammatory infiltrates, myxoid changes, sclerosis and haemorrhage (Fig. C & D). Reticulin stain was positive (Fig. E). Immunohistochemistry showed positive staining for Cytokeratin, Vimentin and P 40 and negative for S 100, CD 34 and P 16. Patient was expired 2 months after the surgery.

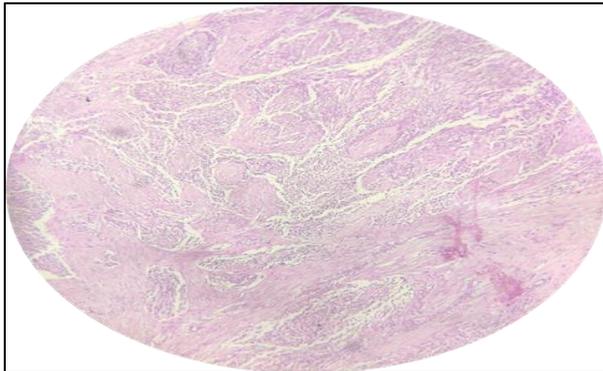


Fig. C (H & E, 10x view)

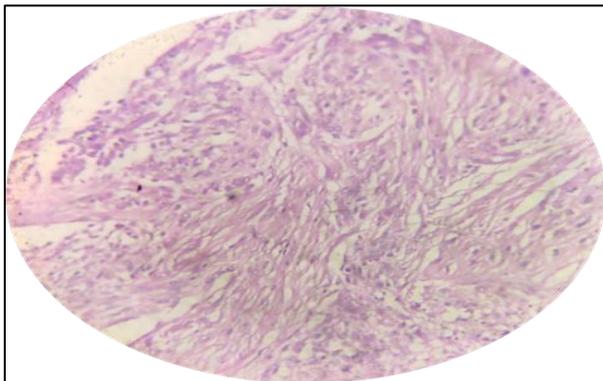


Fig. D (H & E, 40x view)



Fig. E Reticulin stain

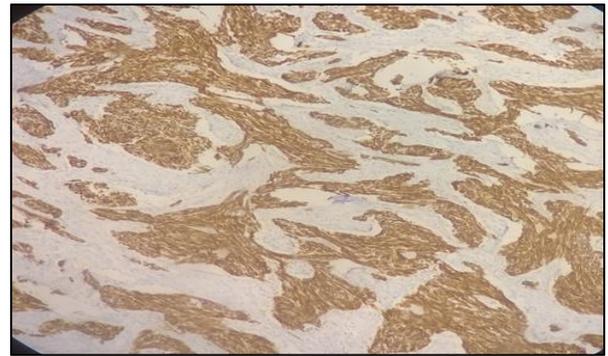


Fig. F Cytokeratin positive



Fig. G Vimentin positive

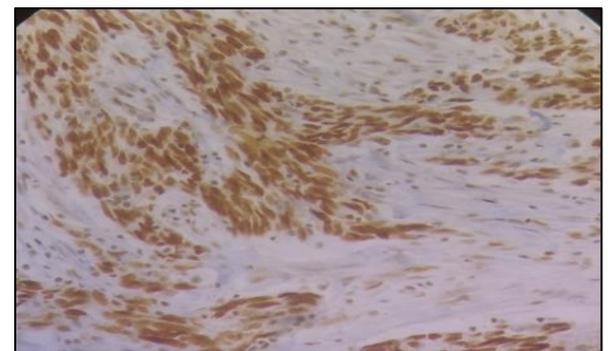


Fig. H P40 Positive

Fig. A & B: Patient with the skin lesion. Note the blackish discoloration. **Fig. C & D:** H & E stained sections 10 x & 40x view respectively. Note the spindle cells with elongated nuclei and prominent nucleoli. **Fig. E:** Reticulin stain. Note characteristic alveolar pattern suggesting carcinoma. **Fig. F,G, H :** IHC positive for cytokeratin, Vimentin & P40 respectively.

DISCUSSION

Among the different variants of squamous cell carcinoma, spindle cell carcinoma is rare variant arising in the sun exposed areas or irradiated skin. Other predisposing factors include solid organ transplantation and immunosuppression. It is most commonly found in white men above 70 years of age and rarely in asian population. It is commonly noticed as an exophytic plaque or nodule mostly in head & neck regions and upper extremities. Solar elastosis also favours the formation of spindle cell carcinoma.

Tumour is composed of closely packed fascicles of pleomorphic spindle cells with frequent mitotic activity. Keratinisation is usually absent. The tumour involves the dermis and may extend into subcutis and along interlobular fat septa. The most common differential diagnoses include superficial undifferentiated pleomorphic sarcoma, atypical fibroxanthoma, desmoplastic and spindle cell melanomas, leiomyosarcomas and sarcomatoid lymphomas. Immunohistochemical markers conclusive for diagnosis include positive staining for P63, P40, 34βE12 and MNF 116.

The currently accepted theory for the origin of these tumours is monoclonality. The morphological changes have been postulated to be caused by epithelial - mesenchymal transition, in which the precursor squamous cells lose polarity and cohesiveness and transform into spindle shaped cells, acquiring increased motility and invasiveness. Spindle carcinoma has a worse prognosis compared to other conventional variants in which depth of invasion and origination at site of sunburn or irradiation plays a crucial role.

CONCLUSION

This case report illustrates spindle cell squamous cell carcinoma with a unique presentation in a middle aged Indian man. Though spindle cell carcinoma is a rare entity, it should be always considered while dealing with a spindle cell lesion. The role of IHC in spindle cell carcinoma is also described.

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