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INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/19125
DOI URL: http://dx.doi.org/10.21474/IJAR01/19125

RESEARCH ARTICLE

COEXISTENCE OF SYNCHRONOUS TRIPLE CARCINOMAS RESECTED IN A76YEAR OLD PATIENT- A RARE CASE REPORT

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Manuscript Info

Manuscript History
Received: 29 May 2024
Final Accepted: 30 June 2024
Published: July 2024

Key words:-
Squamous Cell Carcinoma, Basal Cell Carcinoma, Basaloid Variant, Triple Malignancy

Abstract

The coexistence of synchronous triple carcinomas in a single patient is a rare occurrence. Only a few cases and patient reviews of triple malignancy have been reported in literature. We report here a case of 76year old male that details the existence of squamous cell carcinoma of lip, basal cell carcinoma of left ala of nose and basaloid variant of squamous cell carcinoma of chest wall. Existence of multiple primary carcinomas can be considered as a rare occurrence but due to improved effectiveness in therapies and diagnostic tools, the situation has become more frequent in recent times.

Introduction:-

Synchronous cancers are defined as two or more primary neoplasms diagnosed in a single patient within a period of six months [1]. According to the study done by the National Cancer Institute in 2011, the number of patients with multiple primary cancers is increasing at a dramatic rate [2]. Warren and Gates outlined a criterion for defining multiple primary malignancies which included: (a) Each tumour must have a clear image and histological confirmation of malignancy (b) Each tumour must be topographically distinct and separated by a healthy mucosa with at least 2cm distance between the two (c) The lesions must be primary and not metastasis of each other [3]. Based on thiscriteria, a diagnosis of synchronous triple malignancies was made for this patient.

Squamous cell carcinoma of the lip comprises over 25% of all oral cancers and is more frequently seen in men aged over 45 years due to chronic sun exposure, tobacco and alcohol consumption [4,5]. The recurrence rate remains low and the prognosis is also relatively very good.

Basal cell carcinomas of the face account to 80% of all BCCs out of which 25-30% are found to have a predilection towards nose [6]. BCC of the ala of nose, as being an aggressive tumour, may infiltrate the muscles and may lead to destruction of cartilaginous structures which is characteristic for locally advanced tumours. Larger tumours may also involve the nostrils and alar-facial and naso-facial grooves.

Basaloid squamous cell carcinoma is a rare variant of squamous cell carcinoma which occurs predominantly in men in their 60 and 70s. BSCCs have a predilection for supra-glottis, larynx, pyriform fossa, base of tongue and have also been reported in uterine cervix, lungs and thymus [6]. This rare variant of SCC in head and neck region have a relative frequency of only 2%. BSCC shows characteristically lobules, nests and cribriform patterns of basaloid cells that commonly have abrupt foci of squamous differentiation within the nests. The surrounding stroma is fibrotic with occasional deposits of hyaline basement membrane like material adjacent to tumour [7].

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Case presentation:
A76 year old male presented to the OPD in December 2023 with anulcerative growth over left ala of nose which according to the patient was present since birth and initially presented as a small mole. According to the patient, there was rapid increase in the size of this ulcer since few months. The patient also complaints of two other growths, one as an ulcer over the mucosal part of lower lip and other as a brownish black ulcero-proliferative growth over chest wall with both occurring within a period gap of five months. The swellings were insidious in onset and were mainly painless and slightly progressive in size. There was no history of trauma, past surgical history or any significant medical history. The swellings were not associated with any discharge, bleeding, nasal obstruction or epistaxis. On clinical inspection, a single greyish white ulcer was identified over mucosal aspect of lip measuring 2.5x1.5cm. A greyish brown ulcero-proliferative growth was identified over left ala of nose measuring 1.7x1.5cm [Figure A]and another well-defined greyish brown proliferative growth measuring 2x3x0.5cm was identified over chest wall [Figure B]. There were no palpable supraclavicular and bilateral axillary lymph nodes on local examination. Laboratory investigations were all normal. The patient underwent wide local excision and had an uneventful course post-surgery. The latest follow up examination results showed no signs of tumour recurrence or metastasis.

Microscopic examination:
Histopathological sections examined from lip ulcer shows an invasive tumour with nests of squamous epithelial cells forming keratin pearls showing morphological features of Keratinizing Moderately differentiated Squamous Cell Carcinoma [Figure C]. Sections examined from growth over left ala of nose showed features consistent with Basal cell carcinoma [Figure D]and from chest wall growth showed morphological features of Basaloid variant of Squamous cell carcinoma [Figure E]. All margins and deep resection margin were found to be free of tumour. Sections examined from specimen labelled as central compartment lymph node showed parathyroid tissue only, no lymph node tissue was identified. On immunohistochemistry, 76-100% of cells from chest wall were found to be immunoreactive for CK7, p63[Figure F], p16, p40, EMA, YAP1, BerEP4 and GATA3. >90% cells showed p53 positivity and 80-90% positivity was seen for Ki67.

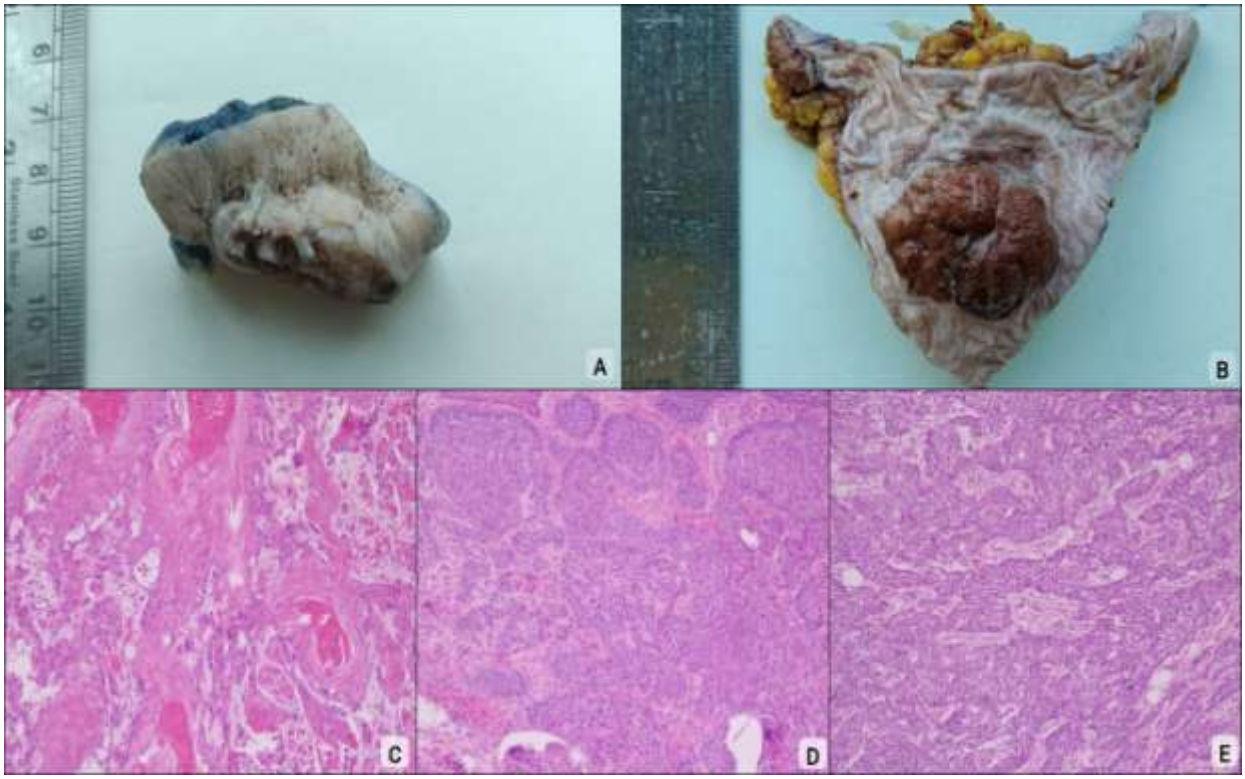

Figure: - A) Greyish brown ulcerative growth from left ala of nose measuring 1.7x1.5cm; B) Greyish brown proliferative growth from chest wall measuring 2x3x0.5cm; C) Section examined from lip ulcer shows feature of Moderately differentiated carcinoma (H&E, 40x);D) Sections examined from left ala of nose shows features of

Basal cell carcinoma (H&E, 40x); E) Sections examined from chest wall shows features of Basaloid variant of Squamous cell carcinoma (H&E, 40x).

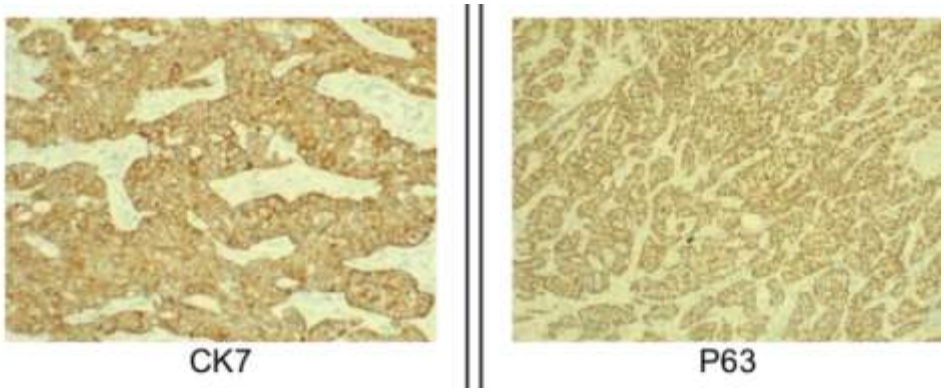

Figure: - F) Immunohistochemistry shows immunoreactivity for CK7 and P63 in lesional cells (40x).

Discussion:-

In 2020, the World Health Organization reported approximately 10 million cancer deaths worldwide. The treatment of multiple primary cancers remains a challenge due to lack of proper guidelines and surgical treatment remains the gold standard for solid tumours in early and advanced stages. The potential risk factors include male gender, smoking, sun exposure, genetic factors and and severe burns. The clinical presentations include ulcerative, infiltrative or haemorrhagic nodules.

More than 90% of lip carcinomas are squamous cell carcinomas and have a predilection towards the lower lip [8,9]. With respect to oral cancers, the frequency of lip cancers has been reported to be around 2-20% [10,11]. The 10year survival rate can be as high as 98% for these cases and recurrence free survival rate remains more than 90% [12].

Basal cell carcinoma is a common non melanoma skin cancer and its predilection towards nose makes it 2.5 times higher at the risk of recurrence. Due to the anatomical position and pre-surgical identification of the tumour margins, it is considered as a high-risk malignancy [13]. These tumours may lead to infiltration and destruction of surrounding muscles and cartilage in advanced cases. The prognosis is excellent and has a survival rate of around 100% in cases that have not spread to other sites [14]. The rate of metastasis is estimated to be less than 0.1% but may develop in new sites after primary curative treatment [15].

Basaloid variant of squamous cell carcinoma is a rare separate entity (1%) according to WHO 2005 and is an aggressive, high-grade variant of SCC composed of squamous and basaloid components with histological features distinct from well or moderately differentiated SCC. 35-50% of cases show distant metastasis involving bone, lungs, skin and brain [16]. Lymph node involvement is associated with bad prognosis. Winzenberg et al showed that without lymph node metastasis, BSCC have an 18.6months survival rate and with lymph node metastasis a 47.6months survival rate [17]. Wain et al [18] and Barnes et al[19] diagnosed cases of BSCC based on the following criteria: (a) presence of submucosal soft tissue infiltration in an ulcerated or exophytic mass (b) Solid basaloid appearing dysplastic islands with biphasic pattern showing necrosis. Abrupt foci of squamous differentiation with or without keratin pearls and squamous epithelium showing dysplastic features.

On immunohistochemistry, Basal cell carcinomas are positive for BCL2 and BerEp4 and negative for EMA. Basaloid squamous cell carcinomas show positivity for EMA, CEA and 34 beta E12. Squamous cell carcinomas express p40 and p63. In addition, basaloid SCC also express MMP1, MMP2 and MMP9 than squamous cell carcinomas [20]. The basaloid squamous cell carcinomas showed a greater percentage of positivity and intense staining for p53 as compared to squamous cell carcinomas [21].

Conclusion:-

Basal cell carcinoma, squamous cell carcinoma and basaloid variant of squamous cell carcinoma differ in prognosis and risk of metastasis. Review and study of rare cases for diagnostic purpose and patient management helps to serve as a reference for further future similar clinical cases.

References:-

1. Cao C, Parikh P, Moezaradlan K, Anantharaman A, Azarm A and Lai J: Synchronous primary pancreatic ductal carcinoma and colonic adenocarcinoma present in a patient with history of skin squamous cell carcinoma. Anticancer Res 40(7): 4029-4032, 2020
2. Bray F, Ferlay J, Soerjaymatarm I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin 2018 68(6): 394-424
3. Warren S. Multiple primary malignant tumours. A survey of the literature and a statistical study. Am J Cancer 1932 16: 1358-1414
4. Maruccia M, Onesti M.G., Parisi P. Lip cancer: a 10year retrospective epidemiological study. Anticancer Res. 2012; 32(4):1543-1546
5. Han A.Y., Kuan E.C., Mallen St Clair J. Epidemiology of squamous cell carcinoma of the lip in the United States: a population-based cohort analysis. JAMA Otolaryngol. Head Neck Surg. 2016; 142(12): 1216-1223
6. Wollina U. Epithelial tumours of the outer nose. Indian J Dermatol. 2003; 48:194-199
7. Banks ER, Frierson HF, Mills SE, George E, Zarbo RJ, Swanson PE. Basaloid squamous cell carcinoma of the head and neck: a clinicopathologic and immunohistochemical study of 40 cases. Am J Surg Pathol 1992; 16:939-46
8. Wain SL. Kier R, Vollmer RT, Mills SE, George E, Zarbo RJ, Swanson PE. Basaloid squamous cell carcinoma of the tongue, hypopharynx and larynx: a report of 10 cases. Hum Pathol1986; 17; 1158-66
9. Rena W, Lia Y, Liua C. Surgical management of squamous cell carcinoma of the lower lip: an experience of 109 cases. Med. Oral Pathol. Oral Cir. Bucal. 2014; 19(4): e398-402
10. Slama B. Precancerous lesions of the buccal mucosa. Revue de Stomatologie et de Chirurgie Maxillo-faciale. 2001; 102(2)-77-108
11. Wainstein AJA, Oliveira TA, Guelfi DCF, Gontijo BR, Castro EV, Carvalho RA, Paz NM, Lacerda LT. Limb amputation for squamous cell carcinoma of the skin- factors involved in this poor evaluation. Rev Col Bras Cir. 2012; 39(3):173-177
12. Mathes S.J., editor. The Head and Neck: Part 2. Saunders Elsevier; Philadelphia, Pa: 2006
13. Wollina U, Bennewitz A, Langner D. Basal cell carcinoma of the outer nose: overview on surgical techniques and analysis of 312 patients. J Cutan Aesthet Surg. 2014; 7(3):143-150
14. Dandurand M, Petit T, Martel P, Guillot B. Management of basal cell carcinoma in adults Clinical practice guidelines. Eur J Dermatol. 2006; 16(4):394-401
15. Walling HW, Fosko SW, Geraminejad PA, Whitaker DC, Arpey CJ. Aggressive basal cell carcinoma: presentation, pathogenesis and management. Cancer metastasis Rev. 2004; 23:389-402
16. Diwakar IB, Srinivas T, Kolakebail JS, Shetty J, Kukreja P. Basaloid squamous cell carcinoma of scalp from a preexisting cylindroma metastasizing to brain: a rare case report. JCDR. 2016 May; 10(5) ED16
17. Winzenberg SM, Niehans GA, Evan G, Kathleen D, Adams GL. Basaloid squamous carcinoma: a clinical comparison of two histologic types with poorly differentiated squamous cell carcinoma. Otolaryngol Head and Neck Surg, 1998;119:471-5
18. Wain SL, KierR, Vollmer RT, Bossen EH. Basaloid squamous cell carcinoma of the tongue, hypopharynx and larynx. Report of 10 cases. Hum Pathol 1986; 17:1158-66
19. Barnes L, Ferlito A, Altavilla G, MacMillan C, Rinaldo A, Doglioni C, et al Basaloid squamous cell carcinoma of the head and neck: Clinicopathological features and differential diagnosis. Ann Otol Rhinol Laryngol 1996; 105:75-82
20. Beer TW, Shepherd P, Theaker JM: BerEP4 and EMA and distinction of basal cell, squamous cell, squamous cell and basosquamous carcinomas of the skin. Histopathology 2000, 37:218-223
21. Coletta RD, Cotrim P, Vargas PA, Vargas PA, Villalba H, Pires FR, de Moraes M, et al. Basaloid squamous carcinoma of the oral cavity: Report of 2 cases and study of AgNOR, PCNA, p53 and MMP expression. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2001; 91:563-9.