

Case Report

Basaloid squamous cell carcinoma of tonsil - A rare and aggressive variant

Deepak MB¹, Mahsheena KM^{2*}, C.R. Sirajunnisa Begum³, Hana Abdul Kareem²

¹Assistant Professor, ²PG Resident, ³Associate Professor

Department of Pathology, Karuna Medical College, Palakkad, Kerala, India

*Corresponding author email: mahshikm@yahoo.com

	International Archives of Integrated Medicine, Vol. 2, Issue 7, July, 2015.	
	Copy right © 2015, IAIM, All Rights Reserved.	
	Available online at http://iaimjournal.com/	
	ISSN: 2394-0026 (P)	ISSN: 2394-0034 (O)
	Received on: 05-07-2015	Accepted on: 12-07-2015
	Source of support: Nil	Conflict of interest: None declared.

Abstract

Basaloid squamous cell carcinoma (BSCC) in tonsil is a rare and aggressive variant of squamous cell carcinoma. The tonsil is an uncommon site of BSCC and just fourteen cases have been accounted for in the worldwide writing. Most common tonsillar malignancies are squamous cell carcinoma and lymphoproliferative lesions. We have presented here a rare case of incidental finding of BSCC in a 62 years old female patient who presented with unilateral enlargement of tonsil without ulceration and no preceding history of associated high risk factors like tobacco chewing, cigarette smoking or alcoholism. It is for these rarities we are presenting this aggressive tumor of tonsil.

Key words

Squamous cell carcinoma, Lymphoproliferative, Incidental, Rarities.

Introduction

Basaloid squamous cell carcinoma (BSCC) is a high grade uncommon aggressive variant of squamous cell carcinoma which is predominantly found in the upper aerodigestive tract. They are usually diagnosed at an advanced stage, as a result of which they have an unfavorable prognosis with poor survival rates [1]. High risk factors are tobacco chewing, cigarette smoking and alcohol consumption. Wain, et al. first described it in 1986 in the tongue, larynx and hypopharynx [2]. About 170 cases of BSCC of

the head and neck have been reported. Only 14 cases of BSCC arising in the tonsils have been reported in current English literature [1, 2]. We are reporting here a rare case of BSCC of the tonsil with unique presentation.

Case report

A 62 years old female presented with throat discomfort and blocking sensation since 20 days. She found a mass in the throat on self inspection. No history of sore throat or fever. Patient had a history of common cold 1week back. No

significant history of smoking and alcohol consumption. On General examination her vitals were within normal limits and on systemic examination no abnormalities were detected. Local examination of Throat revealed an enlarged and congested tonsil almost reaching the mid line. Left tonsil was normal. Clinical diagnosis was unilateral hypertrophied right tonsil. All the routine blood and preoperative investigations were done and was within normal limits except for an elevated ESR of 65 mm/hour. Bilateral tonsillectomy was performed.

Gross examination

Right and left tonsils were received separately. Right tonsil measuring 3x2x1.5cm. External surface was smooth. Cut surface showed a gray white firm to hard ill-defined lesion measuring 1.5x1.0 cm with foci of hemorrhage (**Figure - 1**). Left tonsil was slightly enlarged measuring 2.5x1.5x1 cm. Cut section was unremarkable and firm.

Figure – 1: Photomicrography of cut surface of right tonsil showing a gray white firm ill-defined lesion.



Microscopic examination

Histopathological examination of the excised specimen showed lymphoid tissue (tonsillar) with an infiltrating neoplasm composed of tumor cells arranged in lobules having round to oval hyperchromatic nuclei with inconspicuous nucleoli and scanty cytoplasm. Some of the masses showed a 'comedo pattern' with central

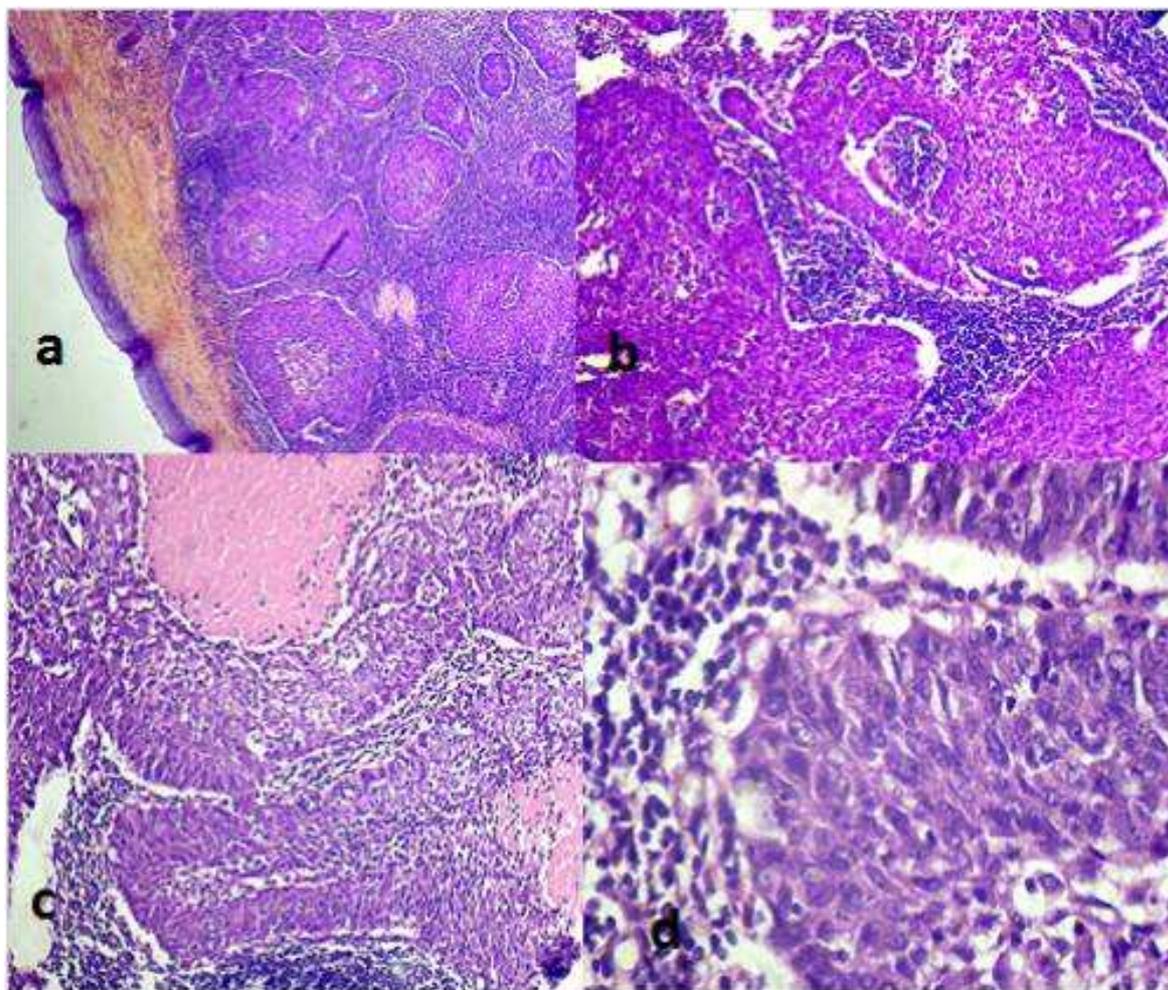
necrosis. Foci of squamous differentiation seen (**Figure - 2a, 2b, 2c, 2d**). These features were consistent with basaloid squamous cell carcinoma.

Final impression was BASALOID SQUAMOUS CELL CARCINOMA with hypertrophied lymphoid follicles of right tonsil. Left tonsil free of tumor.

Discussion

Basaloid squamous cell carcinoma is a rare and aggressive variant of squamous cell carcinoma with a strong predilection for the head and neck region [2]. It was defined as a high grade variant of squamous cell carcinoma by WHO [3]. The upper aerodigestive tract is the most common site of origin of this tumor in the head and neck, especially the epiglottis, hypo pharynx (piriform sinus) and base of the tongue [4]. Since the first description of the histopathological entity by Wain, et al. in 1986 [1], approximately 170 cases of head and neck BSCC have been described [2]. Of the head and neck cases BSCC originating from the tonsils is uncommon, with only 14 cases having been described in literature [3–6]. BSCC is reported to occur in both sexes with male predominance between 60 and 80 years old [7] with risk factors like alcohol and tobacco consumption as frequent antecedents. The tumor commonly presents as an exophytic mass with ulceration. Its physical attributes don't separate fundamentally from those of squamous cell carcinoma. Basaloid variant cannot be suspected clinically unless otherwise metastasis is found in cervical lymph node or lungs as it is an aggressive lesion often with an advanced clinical stage of disease at presentation, including extensive local invasion, multi focality, metastatic disease, and a short survival period. Aggressive behavior is characterized by perineural invasion, cervical lymph node metastases, and distant spread to lung, liver, bones, brain and skin has been observed [8, 9]. In our case except for the unilateral diffuse enlargement of right tonsil with no other clinical attributions, malignancy was not suspected.

Figure – 2: Photomicrography showing a, b) tonsillar lymphoid tissue with an infiltrating neoplasm composed of lobules of basaloid cells with small cystic spaces (H & E stain, 100X magnification). c, d) Tumor mass showing peripheral palisading of cells and comedonecrosis. (H & E stain; 400X)



BSCC is known to emerge from multi potential primitive cells in the basal layer of the surface epithelium or from the salivary channel lining epithelium. The histopathological characteristic of this carcinoma is its basaloid pattern, intimately connected with squamous cell carcinoma. The basaloid part comprises of small, crowded cells in a lobular arrangement, closely restricted to the surface mucosa. These cells have dark hyper chromatic nuclei, scant cytoplasm and no nucleoli. Small cystic spaces containing mucinous like material are interspersed within these lobules. Central coagulation necrosis within the lobules is seen regularly [1].

By immunohistochemistry, BSCC expresses cytokeratin and epithelial membrane antigen.

Immunohistochemistry may be of help in diagnosis of small endoscopic biopsies in which only a partial view of the tumour is seen. Diagnosis of BSCC still remains on hematoxylin and eosin sections by recognizing the typical diagnostic criteria defined by Wain, et al. [3].

The possibility of finding a second primary tumor (either synchronous or metachronous) has to be borne in mind when diagnosing a BSCC in the head and neck. McKay and Bilous described a case of BSCC in the hypopharynx which showed in the surgical specimen a microinvasive squamous cell carcinoma in the left arytenoids region [10]. Seidman, et al. have reported two cases of BSCCs arising in the pyriform sinus and vallecula associated with esophageal small cell

carcinoma and palatal squamous cell carcinoma respectively [11]. Wan, et al. reported a BSCC of the nasal cavity in a patient who also had nasopharyngeal carcinoma [12]. Metachronous second primaries in the upper aerodigestive tract, bronchus and colon have also been reported [3]. In our patient, Ultrasound guided Fine needle aspiration cytology of cervical insignificant lymph nodes revealed no metastases. Evaluation of the upper aerodigestive tract revealed no other malignancies. Abdominal and thoracic CT scans were normal as well, thus ruling out a second primary in the gastrointestinal and respiratory tract.

Surgical excision of the tumor followed by post-operative irradiation has been advised as an appropriate measure due to local aggressiveness of the tumor, owing to high mortality rate. Adjuvant chemotherapy has been recommended for prophylaxis against distant metastases [13]. This was advised for our patient who underwent complete excision but she refused radiotherapy and chemotherapy. She was in good health with no evidence of complications, local recurrence or distant metastases 1 year after surgery and is under close follow up.

Conclusion

BSCC of tonsil with absence of mucosal ulceration in a female patient with no history of tobacco chewing or alcohol consumption and absence of aggressive behavior is very rare. Hence this case is presented for its rarity.

Acknowledgement

We acknowledge to all staff and management of Karuna Medical College, Palakkad.

References

1. Wain SL, Kier R, Vollmer RT, Bossen EH. Basaloid-squamous carcinoma of the tongue, hypopharynx, and larynx: Report of 10 cases. *Hum Pathol*, 1986; 17: 1158-66.
2. Zbren P, Nuyens M, Stauffer E. Basaloid squamous cell carcinoma of the

hypopharynx. *ORL J Otorhinolaryngol Relat Spec*, 2003; 65: 332-40.

3. Cardesa A, Zidar N, Ereno C. Basaloid squamous cell carcinoma. In: *Pathology and genetics of head and neck tumours*. Barnes L, Eve-son JW, Reichart P, Sidrasky D (eds.); Kleihues P, Sobn LH (series eds.). World Health Organization classification of tumours. IARC Press; Lyon, 2005; p. 124-5.
4. Marioni G, Gaio E, Giacomelli L, Marchese-Ragona R, Staffieri C, Staffieri A, Marino F. Endoglin (CD105) expression in head and neck basaloid squamous cell carcinoma. *Acta Otolaryngol*, 2005; 125: 307-11.
5. Paulino AF, Singh B, Shah JP, Huvos AG. Basaloid squamous cell carcinoma of the head and neck. *Laryngoscope*, 2000; 110: 1479-82.
6. Khurana KK, Powers CN. Basaloid squamous carcinoma metastatic to renal-cell carcinoma: Fine-needle aspiration cytology of tumor-to-tumor metastasis. *Diagn Cytopathol*, 1997; 17: 379-82.
7. Soriano E, Faure C, Lantuejoul S, Reyt E, Michel B, Brambilla E, et al. Course and prognosis of basaloid squamous cell carcinoma of the head and neck: a case-control study of 62 patients. *Eur J Cancer*, 2008; 44: 244-250.
8. Eryilmaz A, Gocer C, Acar A, Dagli M, Albayrak L. Basaloid squamous cell carcinoma of the larynx. *J Laryngol Otol*, 2002; 116: 52-3.
9. Coletta RD, Cotrim P, Vargas PA, Villalba H, Pires FR, de Moraes M, de Almeida OP. Basaloid squamous carcinoma of the oral cavity: report 450 wspczesna onkologia/contemporary oncology 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.
10. McKay MJ, Bilous AM. Basaloid-squamous carcinoma of the

- hypopharynx. *Cancer*, 1989; 63: 2528-31.
11. Seidman JD, Berman JJ, Yost BA, Iseri OA. Basaloid squamous carcinoma of the hypopharynx and larynx associated with second primary tumors. *Cancer*, 1991; 68: 1545-9.
 12. Wan SK, Chan JK, Tse KC. Basaloid-squamous carcinoma of the nasal cavity. *J Laryngol Otol*, 1992; 106: 370-1.
 13. Erdamar B, Suoglu Y, Sirin M, Karatay C, Katircioglu S, Kiyak E. Basaloid squamous cell carcinoma of the supraglottic larynx. *Eur Arch Otorhinolaryngol*, 2000; 257: 154-7.