Congenital Granular Cell Epulis: A Rare Entity

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Abstract

Congenital granular cell epulis (CGCE) is a rare soft tissue lesion seen exclusively in the neonates which is benign in nature. The common site of occurrence is the maxillary or mandibular alveolar ridge. The clinical significance of this tumor is its location which hampers with breast feeding, posing a potential airway complication and parental apprehension. In this literature we report a case of a one day old baby who reported with feeding difficulty, diagnosis of the lesion and the surgical management of the same.

Keywords: *New born, Pregnancy tumor, Congenital Epulis.*

Introduction

Congenital granular cell epulis (CGCE) is a rare soft tissue lesion seen in the neonates which is benign in nature. The common site of occurrence is the maxillary or mandibular alveolar ridge[1,2]. It was first described by Neumann in the year 1871 and it is also called as Neumann's tumor. The etiology is unknown. Clinically the lesion presents as a solitary mass or as multiple lesions. Large or multiple lesions can cause airway obstruction as well as difficulty in post-natal feeding[3]. The lesion appears either as a sessile or pedunculated mass of varying sizes, smooth surfaced, pink to reddish in color and firm in consistency. Congenital epulis does not increase in size after birth. Spontaneous regression has been reported in few cases[4] .

The lesion is benign in nature with no recurrence. The treatment modalities is surgical excision of the mass by conventional method or by using CO2 laser[5]. Histiogenesis is not certain, several theories of Origination of the lesion has been postulated namely odontogenic, fibroblastic, hystiocytic, myoblastic and neurogenic. This case report describes the management of a 1 day old neonate with congenital granular cell epulis in the anterior maxillary alveolar ridge.

Case Report: A one day old female neonate reported to us with a complaint of swelling in the upper right front tooth region which was noticed at birth. The swelling was protruding out of the oral cavity (Fig:1). The major concern for the mother was that the swelling hampered breast feeding. The infant was otherwise healthy weighed about 3.3 kgs. The pregnancy was normal and delivery was normal at full term. Family history was non-contributory.

Fig: 1

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Fig: 2

Fig: 3

On clinical examination, a pedunculated mass arising from the right maxillary alveolar ridge of size 1.5x1 cm. The color appeared the same as the oral mucosa. On palpation,the swelling was firm in consistency and smooth attached by a thin pedicle to the alveolar ridge. It interfered with the normal closure of the mouth with no airway compromise. The clinical diagnosis was made as congenital epulis. The general physical examination of the child was normal. Surgical excision was planned and performedusing electrocautery to provide hemostaisunder general anesthesia.(fig:2) Recovery was uneventful with no intra-operative and post-operative complications. The child was assessed after a week and seemed to be thriving and gaining weight. The specimen (fig:3) was fixed in 10% formalin and processed for histopathogical examination.

Microscopic examination revealed circumscribed lesion lined by stratified squamous keratinized epithelium with cluster of cells with a central nuclei and eosinophilic cytoplasm. Histopathogically it was confirmed as congenital granular cell epulis.

Discussion

CGCE is a rare benign lesion seen in the neonates. CGCE has a female predilection with an 8:1 female to male infants ratio and more commonly is seen in the maxillary alveolar ridge, as seen in our case [6].Majority of the case presents as a solitary pedunculated mass or as multiple tumours[7,8] .Large lesions causes interference with feeding and airway obstruction. Usually the diagnosis is made at birth. Prenatal diagnosis can be made with an ultrasonography and MRI by the 36th week of gestation which would further be helpful in planning the treatment in prior[9].

The clinical presentation of the tumor is always smooth surfaced, sessile or pedunculated, the color of the lesion is same as that of the oral mucosa. It is firm in consistency and non-tender. Differential diagnosis can be given as fibroma, hemangioma, granuloma, schwannoma, myoblastoma[10]. Prenatal MRI of oral cavity would give a better picture to differentiate from other lesions[11,12].

The surgical intervention includes immediate surgical excision by conventional method or by the use CO_2 laser[5]. Immediate intervention is required as the lesion may interfere with feeding as seen in our case and large lesions would cause airway obstruction. Literature shows surgical excision of the lesion does not hamper the bone growth or teeth eruption[11,12].

In our case the surgical excision of the mass was done under general anaesthesia with nil intra-operative difficulties. The neonate was comfortable with feeding from the next day. Patient was followed up and the healing was satisfactory.

Histopathological features includes circumscribed mass comprised of nests of polygonal or spindle cells with abundant eosinophillic cytoplasm with eccentric nuclei. Lined by stratified squamous epithelium with absence of rete ridges [13,14].

In our case the lesion was present in the anterior maxillary region of size 1.5 *1 cm which was pedunculated, smooth surfaced clinically correlating with the features of Congenital granular cell epulis. The main concern in our case was that the lesion interfered with feeding. So immediate surgical intervention was done. Prenatal diagnosis was not made with Ultrasonography or MRI. The diagnosis was confirmed histopathologically.

Conclusion

Congenital granular cell epulis is a rare entity. The tumor is mostly misdiagnosed as it is a rare occurrence.

Our case report is to emphasize the importance in diagnosing the lesion and treating it accordingly. The clinician should also consider congenital/benign/ malignant/lymphatic malformations as differential diagnosis. A multidisciplinary approach with the team of the pediatricsurgeon, oral maxillofacial surgeon, anesthetist and oral pathologist is required to arrive at the correct diagnosis and perform an immediate surgical intervention. Prognosis appears to be good.

Ethical Clearance: Nil

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Conflict of Interest: Nil

References

1. Fuhr AH, Krogh PH. Congenital epulis of the newborn: centennial review of the literature and a report of case. Journal of oral surgery (American Dental Association: 1965). 1972 Jan;30(1):30.
2. Chindia ML, Awange DO. Congenital epulis of the newborn: a report of two cases. British dental journal. 1994 Jun;176(11):426-8.
3. De Lacalle JM, Aguirre I, Irizabal JC, Nogues A. Congenital epulis: prenatal diagnosis by ultrasound. Pediatric radiology. 2001 May 1;31(6):453-4.
4. Jenkins HR, Hill CM. Spontaneous regression of congenital epulis of the newborn. Archives of disease in childhood. 1989 Jan 1;64(1):145-7.
5. Lapid O, Shaco-Levy R, Krieger Y, Kachko L, Sagi A. Congenital epulis. Pediatrics. 2001 Feb 1;107(2):e22-.
6. Hasanov A, Musayev J, Onal B, Rahımov C, Farzaliyev I. Gingival granular cell tumor of the newborn: a case report and review of literature. Turk Patoloji Derg. 2011 May 1;27(2):161-3.
7. Gupta O, Arora R, Gupta K, Sharma U. Congenital granular cell lesion in newborn mandible. Nigerian journal of clinical practice. 2013 Sep 10;16(3):401-3.
8. Karthiga KS, Rajesh R. Congenital epulis-congenital granular cell lesion: A case report. Journal of Indian society of pedodontics and preventive dentistry. 2006 Apr 1;24(2):104.
9. Messina M, Severi FM, Buonocore G, Molinaro F, Amato G, Petraglia F. Prenatal diagnosis and multidisciplinary approach to the congenital gingival granular cell tumor. Journal of pediatric surgery. 2006 Oct 1;41(10):e35-8.
10. Rajendran R. Shafer's textbook of oral pathology. Elsevier India; 2009.
11. Roy S, Sinsky A, Williams B, Desilets V, Patenaude YG. Congenital epulis: prenatal imaging with MRI and ultrasound. Pediatric radiology. 2003 Nov 1;33(11):800-3.
12. Kim YD, Kim HJ, Lee NK, Ha WH, Lee CH, Park SE. Congenital epulis: prenatal ultrasonographic and postnatal MR features with pathologic correlation. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology. 2008 Nov 1;106(5):743-8.
13. Bianchi PR, De Araujo VC, Ribeiro JW, Passador-Santos F, Soares de Araujo N, Soares AB. Multiple congenital granular cell epulis: case report and immunohistochemical profile with emphasis on vascularization. Case reports in dentistry. 2015 Feb 5;2015.
14. Conrad R, Perez MC. Congenital granular cell epulis. Archives of Pathology and Laboratory Medicine. 2014 Jan;138(1):128-31.