

Herniation of the buccal fat pad into the oral cavity : A case report.

PATIL R^a, SINGH S^b, SUBBA REDDY V V^c

ABSTRACT

An interesting lesion is presented, wherein a tiny traumatic perforation of the buccal mucosa and buccinator muscle forced a large portion of the buccal fat pad to extrude into the oral cavity. Such a situation can alarm any clinician & reinforces the importance of careful history taking and thorough examination, before treating patients.

Key Words : Buccal fat pad, Herniation, Trauma

INTRODUCTION

The buccal fat pad is responsible for the fullness of the cheeks in young children, aids in cushioning and sucking function . It is prominent in neonates and infants and is often referred to as the "Sucking / Suctorial pad"^{1,2} .

The buccal fat represents a specialized type of tissue that is distinct from subcutaneous fat. It serves to line the masticatory space, separating the muscles of mastication from each other, from the zygomatic arch, and from the ramus of the mandible. The buccal fat pad consists of a central body and four extensions; buccal, pterygoid, superficial, and deep temporal. The main body is situated deep along the posterior maxilla and upper fibers of the buccinator. The buccal extension is located superficially within the cheek, while the pterygoid and temporal extensions are more deeply situated. The buccal extension is encapsulated by a parotidomasseteric fascia and enters the cheek below the parotid duct. It extends along the anterior border of the masseter and descends into the mandibular retromolar region . The buccal fat pad had limited clinical importance for many years and was usually considered a surgical nuisance because of its accidental encounter either during various operations in the pterygomaxillary space or after injuries of the maxillofacial region. It is currently of interest in esthetic surgery, such as buccal lipectomy in the adult, to modify the contour of the face³ . During the past few years reports have encouraged the use of buccal fat pad for reconstruction of oral defects. The easy mobilization of the buccal fat pad, excellent blood supply and minimal donor site morbidity make it an ideal flap⁴ .

CASE REPORT

A 4 year old girl reported to the Department of Pedodontics and Preventive Dentistry, College of Dental Sciences, Davangere with an intra oral mass on the right buccal mucosa. Four days prior to her presentation the child had fallen while playing and had a blunt trauma to the right side of the face, which resulted in bleeding from the mouth that subsided spontaneously. Later her mother noticed a small mass, which was not present earlier and the child had discomfort while chewing food. Extra oral examination of this otherwise healthy and active child revealed a slightly diffused facial swelling on the right side of the cheek. Intraoral examination revealed the presence of a yellowish brown, freely mobile, soft pedunculated projection from the right buccal mucosa at the level of the occlusion of primary molars (Fig 1). This non-tender irregularly shaped homogeneous mass measuring 2 X 1.5 cm showed some areas of greyish slough (necrosis) due to occlusal trauma. A small laceration of the buccal mucosa was easily located from where the mass of tissue seemed to originate and a blunt instrument could be slid along the pedicle. Based on these findings a provisional diagnosis of traumatic herniation of the buccal fat pad was made. To avoid necrosis and infection of the tissue, the case was treated on a priority basis and it was excised conservatively under local anesthesia (Fig 2 & 3). Antibiotics, anti-inflammatory drugs and an antiseptic mouth rinse were prescribed. The swelling subsided post-operatively and healing was uneventful.

The histopathological examination of the tissue confirmed the earlier made provisional diagnosis of buccal pad fat herniation. The haematoxylin and eosin stained sections revealed connective tissue stroma with groups and sheets of lipocytes, interstitial spaces occupied by abundant polymorphonuclear leucocytes and a few foamy macrophages (Fig 4). In focal areas thrombosed blood vessels were noted.

DISCUSSION

Complications arising from maxillofacial trauma may occur immediately following the injury, during transit to the hospital, in the pre-operative, intra and postoperative phases. Some complications may not arise until months or even years after the injury. It is difficult to perform complete examination in young traumatized children and history given by parents may not always be adequate. Review of literature reveals traumatic

a. Post Graduate Student, b. Associate Professor, c. Professor And Head. Department of Pedodontics And Preventive Dentistry College of Dental Sciences Davangere, Karnataka.



Fig 1 : Intra-oral herniation of buccal fat pad



Fig 2 : Mucosal defect after excision



Fig 3 : Excised part of herniated buccal fat pad

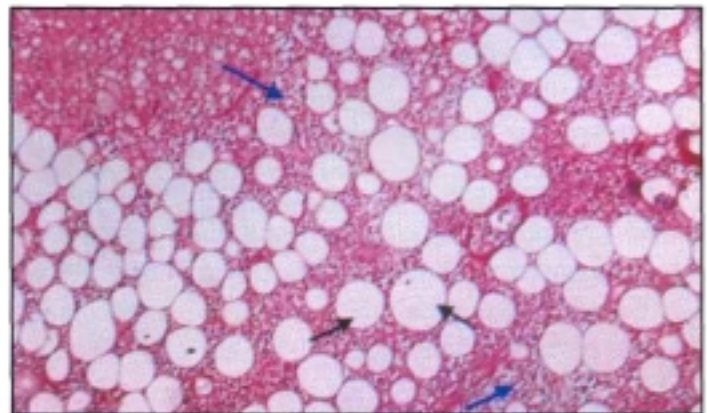


Fig4 : Photomicrograph of the lesion (4 X objective)

herniation of buccal fat pad is a rare phenomenon. Most reported cases were infants or young children with an age ranging from 5 months to 5 years, usually a foreign object such as pencil, held in mouth which resulted in puncture wounds of the buccal mucosa. Further sucking action might result in the fat pad being pulled out. The most characteristic aspect of this lesion is the mucosal injury or perforation is very small compared to the size of the extruded mass.

The buccal mucosa can be traumatized by the teeth in an accident such as falling off a bicycle. An external blow may also cause rupture of the buccal mucosa, as in the case reported here. There has also been a case reported in which herniation of the buccal fat pad into the maxillary sinus occurred associated with the fracture of the lateral wall of the maxillary sinus, following a blow to the face⁶. As reported in literature extra oral herniation is mentioned as pseudoherniation of the buccal fat pad or 'Chipmunk cheek' caused mainly by surgical trauma⁷.

Although benign tumors like lipoma, traumatic fibroma (inflammatory hyperplasia), salivary neoplasm, hemangioma

differential diagnosis², however the history of trauma, absence of prolapse before the injury, its occurrence in infants and young children, specific anatomic site, adipose appearance, locating the perforation from where the mass is arising and the histopathology, are the characteristic features important for diagnosing the condition.

As for the treatment, an alternative to excision is to reposition the herniated buccal fat pad to its anatomic position at the earliest, before a large portion is allowed to extrude, followed by primary closure⁵. Being relatively avascular, fatty tissue when damaged has a tendency to necrose or undergo atrophy⁸. Infection and inflammatory reaction due to salivary contamination, bacterial aggregation and necrosis of the tissue due to occlusal trauma and delay in treatment can often complicate the situation, although partial conservative excision may seem to be a better option. Removal of the fat pad may produce a change in the facial contour, reducing cheek fullness, highlighting the malar eminences and giving a more sculptured look to the face. Since buccal fat pad is intimately related to the masticatory muscles, facial nerve and parotid

wound, great care must be taken to avoid injury to the parotid duct, by locating the parotid papilla. Exploration for foreign bodies and irrigation are important before closing the wound. There has been no reports of recurrence of herniation or any other complications.

ACKNOWLEDGEMENT

The authors thank Dr. Meenakshi Reddy, Reader, Department of Oral Pathology & Microbiology, College of Dental Sciences, Davangere, for her help with the histopathology work.

REFERENCES

1. Messenger K. L, Cloyd W.: Traumatic herniation of the buccal fat pad, Report of a case. *Oral Surg.* 1977 ; 43: 41 - 43.
2. Wolford D. G., Stapleford R. G., Forte R.A., Heath M. : Traumatic herniation of the buccal fat pad. *J Am Dent Assoc.* 1981; 103 : 593-594.
3. Stuzin J. M., Wagstrom L, Kawamoto H. K., Baker T. J, Wolfe A.: The anatomy and clinical applications of the buccal fat pad. *Plast reconstr Surg.* 1990; 85: 29 - 37.
4. Baumann A., Ewers R.: Application of the buccal fat pad in oral reconstruction. *J Oral Maxillofacial Surg.* 2000 ; 58 (4): 389 - 392.
5. Takenoshita Y., Shimada M. and Kubo S.: Traumatic herniation of the buccal fat pad: Report of case. *ASDC J Dent for Child.* 1995 ; 62(3) : 201 -4.
6. Marano P.D., Smart E.A., Kolodny S.C.: Traumatic herniation of the buccal fat pad into maxillary sinus. Report of case. *J Oral Surg.* 1970 ; 28: 531 - 532.
7. Matarasso A.: Pseudoherniation of the buccal fat pad: a new clinical syndrome. *Plast Reconstr Surg.* 1997; (100): 723 - 730.
8. Leopard J.: Complications in maxillofacial injuries. Row N.L and Williams J.L. 2nd Edition, Edinburgh: Churchill Livingstone, 1994 : 845 - 853.

Reprint Requests to :

Dr. Sukhdeep Singh
Associate Professor,
Dept. of Pedodontics & Preventive Dentistry,
College of Dental Sciences,
Davangere - 577 004.
Karnataka.