

## Traumatic Herniation of Buccal fat pad – Surgical Removal: A case report

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**Abstract:** An interesting case of 2 years old male child patient presented with reddish, soft pedunculated mass in the right buccal mucosa followed by a minor traumatic penetration of buccal mucosa with tooth brush.

**Aim:** The purpose of this article is to report a rare interesting lesion in the buccal mucosa of 2 years old male patient and importance of eliciting the careful history taking and thorough examination before treating patient.

**Keywords:** Buccal fat pad, traumatic herniation, surgical removal

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### I. Introduction

The buccal fat pad is one of several encapsulated fat masses in the cheek. It is deep fat pad located on either side of the face between buccinator muscle and several more superficial muscles including the masseter, the Zygomaticus major, Zygomaticus minor.

The inferior portion of buccal fat pad is confined within the buccal space. It should not be confused with the malar fat pad, which is directly below the skin of the cheek. It also not be confused with jowl fat pads. It is implicated in the formation of hollow cheeks and the nasolabial fold, but not the formation of jowls.

The buccal fat pad consist of central body and four extensions, buccal ,pterygoid, superficial, deep temporal. The main body is situated deeply along the posterior maxilla and upper fibres of the buccinator. The buccal extension is located superficially with in cheek. Pterygoid and temporal extensions are more deeply situated.

The buccal extension is encapsulated by a parotid massetric 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<sup>3,7</sup>.

#### Function:

The buccal fat pad is relatively large in neonates and infants. The primary function is chewing and suckling especially in infants. It has been referred as suctorial pad<sup>5</sup>. Another function is gliding pads that facilitate the action of the muscles and act as cushion to protect sensitive facial muscles from injury due to muscle action or exterior force. The negative intraoral pressure induced by their suckling activity may promote the herniation of buccal fat pad from wound. Therefore, a minor tear of the buccinator muscle can allow a herniation into the oral cavity<sup>4</sup>.

In this article, we report a case of traumatic herniation of buccal fat pad in a 2 years old young boy.

### II. Case report

A two years old male child patient was visited the Department of dental surgery with an oral mass on right buccal mucosa with the history of accidental fall with tooth brush in his mouth, two days ago. At the time of injury his mother noticed bleeding from the right buccal mucosa that subsided spontaneously. After that, she noticed a mass appeared from the wound and the child has discomfort while chewing food.

On extra oral examination mild swelling on right side of cheek. Intra oral examination revealed, a large, reddish yellow soft pedunculated mass on the right buccal mucosa. The mass was non tender on palpation and measuring 2×2 cm, protruded over the occlusal surfaces of maxillary and mandibular posterior teeth. Hence, the patient was unable to close his mouth and had difficulty in feeding.



**Fig 1:** Clinical photograph showing extraoral swelling on right side of the face.



**Fig 2:** Intraoral herniation of right buccal fat pad.

The patient was kept under antibiotic coverage and advised soft diet. Then routine blood investigation done. On next day, Under GA , a suture was tied around the peduncle and the base of the mass was excised with minimal bleeding. 3-0 vicryl resorbable suture was placed to close the wound. An antibiotic coverage was given for three succeeding days. The patient was discharged on the third day after surgery. The post operative course was uneventful and two weeks after surgery the wound was satisfactorily healed. There is no cosmetic deformity after a one month followup.



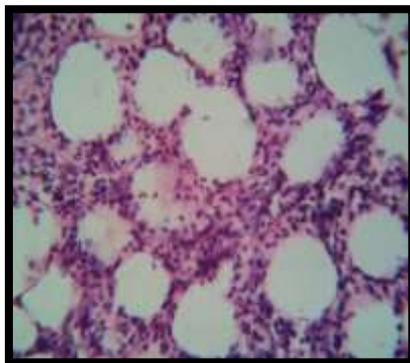
**Fig 3:** After excision



Fig 4: Excised mass of herniated buccal fat pad.

**Histopathologic study:**

Macroscopically, the excised mass was yellow and homogenous. On microscopic examination, a connective tissue stroma with sheets and groups of adipocytes without atypia and no epithelial cover. The interstitial spaces are often occupied with extravasated red cells, acute and chronic inflammatory infiltrates.



**Fig 5:** Photomicrograph showing well circumscribed lobules of mature fat cells separated by thin fibrous septa and the fibrous septa infiltrated by inflammatory cells.

Infiltrated

### III. Discussion

Traumatic herniation of the buccal fat into oral cavity was first described in literature by Clawson in 1968<sup>1</sup>. Trauma affects buccal pad of fat more frequently in infants and young children resulting in traumatic herniation of buccal fat pad. This may include fall with a sharp or blunt object in the mouth, resulting in a laceration of the buccal tissues or due to occlusal trauma.

Herniation of buccal fat pad means intraoral herniation of the buccal fat pad. It is soft, non tender and does not blanch. It is pedunculated in nature and originates from the buccal mucosa near the parotid duct at the level of maxillary occlusal plane. On the other hand, in case of the outward prolapse of the lower portions of buccal fat pad, resulting in facial mass, it has been mentioned as pseudolipoma of the buccal mucosa (or “Chipmunk cheek”<sup>3,5</sup>).

The differential diagnosis includes pyogenic granuloma, inflammatory pseudotumor, foreign body granuloma, traumatic neuroma, lipoma, hemangioma, and salivary neoplasm. Generally history of trauma, an absence of mass before the accident, the specific anatomic site and adipose appearance serves to diagnosis of traumatic herniation of buccal fat pad<sup>4</sup>.

There are two modalities of treatment for the traumatic herniation of the buccal fat pad. When the case is reported immediately, if the protruded mass is small with minimal inflammatory changes, it may be repositioned<sup>2,6</sup>. If the mass is too large to replace in the limited lacerated injury or necrosis has appeared, it is recommended to excise the mass at the base. With either method, care should be taken to avoid injury to the stenson’s duct and orifice<sup>4</sup>.

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