

Herniation of buccal fat pad and Cheek biting: A rare case report

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I. Introduction

The buccal fat pad flap is an axial flap and may be used to fill small-to-medium sized soft tissue and bony defects in the palate, superior and inferior alveoli and buccal mucosa. It is often encountered as it bulges into the surgical field during surgery in the pterygomandibular region.

The buccal fat pad (BFP) as an anatomic element was first mentioned by Heister in 1732 and was described by Bichat in 1802.¹ Since that time, it has been referred to in the literature by different names, although no detailed anatomic description was published until recently. Scammon² was the first to describe the anatomy of the BFP, followed by Goughran.³ The BFP had a 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.^{4,5}

II. Case report

Fifty eight years old female reported with a chief complain of pain over the lower left posterior teeth, for which she was advised root canal treatment and on examination an intra oral mass on the right buccal mucosa was accidentally noticed. She was having history of cheek biting since 6 years but in due course of time it was healed on its own and patient did not experienced any pain over that region. Extra oral examination 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 molars. This non-tender irregularly shaped homogeneous mass was measuring about 4 X 2 cm. Based on these findings and trauma to the cheek region due to occlusion 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. Antibiotics, anti-inflammatory drugs and an antiseptic mouth rinse were prescribed. The swelling subsided postoperatively 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 interstitial spaces occupied by abundant polymorphonuclear leucocytes and a few foamy macrophages (Fig. 5). In focal areas thrombosed blood vessels were noted.



Fig. 1 buccal pad of fat herniation in oral cavity



Fig. 2 sutures passes over the BFP for excision



Fig. 3 exision of BFP done



Fig. 4 suturing

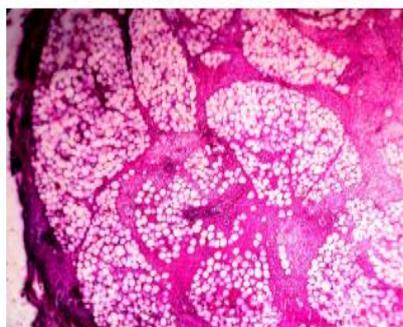


Fig. 5 Photomicrograph showing well-circumscribed lobules of mature fat cells separated by thin fibrous septa (H&E, original magnification * 40).

III. Discussion

The buccal fat pad was first described in 1732 by Heister as “glandular morlares who defined it as glandular structure.⁶Bichat in 1802 named it as “buccal fat pad of Bichat” or the “corpus adeposumbuccae” due to its fatty nature.⁷However Stuzin described it as a rounded, biconvex structure with a thin but distinctive capsule lying between the buccinator and masseter muscles.^{8,9}

Clinically, the buccal fat pad can be used for both reconstructive and cosmetic surgery. A review detailed the clinical/ surgical anatomy pertinent to plastic surgery.¹⁰Both free and pedicle grafts have been described.¹¹⁻¹³ For pedicle grafts, the blood supply of the buccal fat pad has been identified as arising from buccal and deep temporal branches of the maxillary artery as well as the transverse facial branch of the superficial temporal artery.¹³

Trauma affects buccal pad of fat resulting in traumatic herniation of the buccal fat pad. This may include fall with a sharp object in the mouth, or a fall resulting in a laceration of the buccal tissues from occlusal trauma.

Herniation of the buccal fat pad means intraoral herniation of the buccal fat pad. It is soft, nontender, nonpulsatile, and does not blanch. It is pedunculated in nature and originates from the buccal mucosa near the parotid duct at the level of the maxillary occlusal plane. The mass is typically about 3 cm × 1.5 cm × 1.5 cm in dimension. 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 pseudoherniation of the buccal fat pad, or “chipmunk cheek.”^{14,15} The first case of traumatic herniation of the buccal fat pad was first reported by Clawson et al in 1968, and then Brooke et al reported another case and coined the term traumatic pseudolipoma.^{16,17}

The probable reason for the herniation of buccal pad of fat into the oral cavity as suggested by Matarasso is due to a defect or weakness in the parotidomasseteric fascia.¹⁵

The clinical differential diagnosis includes pyogenic granuloma, inflammatory pseudotumor, foreign body granuloma, traumatic neuroma, lipoma, hemangioma, and salivary neoplasm.

Histologically a connective tissue stroma with sheets and groups of adipocytes without atypia and no epithelial cover, with a varying degree of inflammatory cell infiltration is seen. Necrotic change with bacterial proliferation may be seen on the surface.^{18, 19} There are two modalities of treatment for the traumatic herniation of the buccal fat pad. When the case is reported immediately, preferably within four hours, and the protruded mass is small with minimal inflammatory change, the lesion is able to be repositioned immediately.²⁰ If the mass is too large to replace in the limited laceration injury site or necrosis has appeared, it is recommended to surgically remove the mass from the base. Important thing to consider in either of cases is not to traumatize the adjacent parotid papilla and duct.¹⁴ In our case, patient had reported late and the size was relatively large, hence, the mass was excised. There have been no reported cases of recurrence.^{14, 15, 18} Appearance of this lesion may seem to be an alarming situation for any health care professional. A sound knowledge of specific site of occurrence of this lesion can help a professional in diagnosing and managing this lesion promptly

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