Expansive haematoma following buccal fat pad reduction: An unusual case report

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Case Report

Keywords: Fat pad, Lipectomy, Postoperative complication, Hematoma, Case reports

Posted Date: October 3rd, 2023

DOI: https://doi.org/10.21203/rs.3.rs-3376537/v1

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Abstract

The buccal fat pad, an intricate anatomical structure, can be used to manage minor to moderate oral defects and, by your removal, address parafunctional habits leading to intraoral trauma. It also serves aesthetic purposes through reduction. Buccal fat pad reduction is typically a swift, safe procedure with a low complication rate. This report aims to illuminate an unusual case involving a later expansive hematoma following buccal fat pad reduction surgery. This complication posed a potential airway threat and led to severe trismus. Notably, our team effectively managed these issues using minimally invasive methods such as drainage, compression, and medication. This case serves as a vital reminder that late bleeding and expansive hematoma formation are possible outcomes, even when performed by a skilled surgeon. This case also highlights the feasibility of treating substantial hematomas originating from veins without the need for invasive procedures. This report underscores the importance of vigilance in these cases to ensure patient safety.

Introduction

Buccal fat pad reduction (BFP) enhances facial prominences in round-faced patients with low morbidity and high satisfaction rates [1, 2, 3]. While mostly safe, some cases will lead to complications such as haematomas, neuromotor disorders, duct damage, etc. Anatomical knowledge is paramount, and documenting complications and management is of clinical significance [4, 5]. This article describes an unusual case of a later expansive haematoma, which had threatened the patient's airway and discusses possible aetiology and management.

Case report

This report followed the CARE checklist [6]. A healthy 27-year-old woman sought care with complaints about a rounded face and voluminous cheeks that were ulcerated due to orthodontic appliances. The surgical procedure of BFP removal was performed under local anesthesia in an outpatient setting in Natal, Brazil. Using a modified Matarasso technique [7], a smaller incision of approximately 10 mm was made on each side, and the procedure lasted around 30 minutes. Five hours post-procedure, the patient contacted the surgeon, complaining of an abrupt increase in the right swelling. The patient was transferred to the emergency hospital. She had extensive asymmetry, trismus, and the onset of dyspnea. The patient underwent computed tomography, where an expansive liquid collection was visualized in the right masticator space (Fig. 1). The incision was then approached, with a great quantity of blood and clots aspirated, ruling out other hypotheses. There was no direct visualization of the source. A Penrose drain n°1 was installed, and the patient was admitted under intravenous hydration and medication: dipyrone, dexamethasone, and tranexamic acid. The medication was interrupted, and the drain was removed after 72 hours. The treatment was well tolerated with good adherence by the patient. A new contrast-enhanced computed tomography showed a residual haematoma related to the right facial vein (Fig. 2). The patient was followed in an outpatient setting until the 17th postoperative day, with the
resolution of symptoms after analgesics, physiotherapy, and taping. The patient was satisfied with the results (Fig. 3).

**Discussion**

In the case described here, traumas and aesthetic goals were present as procedure indications [8]. The intraoral approach is safer and could be performed with minimal complications (8.45%-18%) [5]. It is crucial to comprehensively discuss risks and benefits and to obtain informed consent [3, 9]. Bleeding after BFP reduction may be linked to profound dissection, undue manipulation, and incisive dissection. None of these actions occurred, as an experienced surgeon conducted the procedure. There were no bleeding signs throughout the surgery or the immediate postoperative period. A hypothesis suggests that a delayed vascular avulsion injury might have happened.

The facial buccal branches and the parotid duct are the structures closely associated and susceptible to complications [10]. In the present case, a large haematoma developed within the masticator space, despite the appropriate technique. This haematoma led to dyspnea and threatened the patient's airway. Unaddressed hemorrhage could obstruct the airway, resulting in apnea, cardiac and pulmonary failure, and even mortality. Consequently, this particular case holds significant value within the literature, serving as a warning, underlining the necessity for understanding and managing such complications.

The management of haematomas originating from facial vessels can necessitate interventions, spanning minimally invasive approaches, embolization, and ligatures [5, 9]. Embolization may lead to some degree of fibrosis, preferably avoided on the face. Ligatures can result in morbidity and scarring. Remains uncertainty about the extent to which minimally invasive methods can successfully resolve significant haematomas [5]. Nevertheless, the presented case underscores the feasibility of treating sizeable hematomas arising from veins without morbidity. A limitation lies in the absence of a preoperative imaging examination, which could have provided potential anatomical variations.

In summary, this report is a reminder that the occurrence of delayed bleeding and sizable hematoma after BFP excision cannot be ruled out, even when the procedure is performed by a skilled surgeon. Though the current case was effectively managed through minimally invasive treatment, it's worth mentioning that some circumstances might require more invasive methods.

**Declarations**

**Funding**

The authors of this paper received no funding for this paper.

**Competing interests**
The authors have no conflict of interest to declare. All authors have viewed and agreed to the submission.

**Ethical approval**

Not required.

**Patient consent**

Consent to participate and publish was obtained. The authors affirm that human research participants provided informed consent for the publication of all images.

**Acknowledgments**

We are very grateful to the patient who is a dentist colleague.

**References**


Figures

Figure 1
Computed Tomography not-contrasted showing an impressive haematoma in the masticator space (>11 cm²)

Figure 2

Post-drainage contrast-enhanced computed tomography highlighting a residual haematoma (1cm²)
Figure 3

Patient on 17\textsuperscript{th} post-operative day with case resolution