

A Novel Approach to Haematoma Evacuation

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Mini Case Review

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Abstract

This article presents a series of cases ranging from 17 year old to 60 year old patient of both the sex with haematoma in the maxillofacial region. The Haematoma cases discussed in this article were caused due to road traffic accident and was present in the malar region on either sides (mostly on the right side). One special case which developed sublingual haematoma on the right side of the floor of the mouth after surgical removal of sublingual salivary gland is also being reported.

Keywords: Haematoma, ZMC fracture, Clotted blood, Swelling, Purplish blue discoloration

Introduction

The term “Haematoma” was coined by Merriam. Haematoma is a collection of blood outside the blood vessels. Most commonly haematoma is caused by an injury to the wall of a blood vessel promoting blood to seep out of the blood vessel into the surrounding tissues. Usually haematoma appear as purplish blue swelling.

Types of haematoma

1. Subdural haematoma – due to brain injury
2. Spinal epidural haematoma
3. Intracranial epidural haematoma
4. Intra-abdominal haematoma
5. Endaural haematoma due to condylar fracture
6. Splenic haematoma
7. Hepatic haematoma
8. Sublingual haematoma due to fractured parasymphysis due to rupture of the mental blood vessel
9. Cheek (malar) -does not resolve on itself [1].

Hematoma in the maxillofacial region may be due to maxillofacial trauma associated with fracture of the facial bones [2].

Investigations

1. Two finger breadth test
2. Aspiration with syringe (Positive aspiration)
3. X ray – PNS view of skull
4. CT scan
5. MRI [3]

Pre-Operative Preparation

1. CBC
2. BT, CT
3. Hb%
4. Blood grouping and Rh typing
5. PT, APTT
6. RFT, LFT, serum electrolytes
7. HbsAg, HCV, ICTC
8. Chest X ray PA view
9. ECG [4]
10. Consent for surgery and anesthesia was taken from all the patients.

All the cases were operated prior to the COVID-19 pandemic.

Armamentarium

Green cloth was spread and the following armamentarium was arranged in a trolley

1. Mouth mirror
2. Probe
3. BP blade no 11
4. BP handle no. 3
5. Howarth periosteal elevator
6. Austin retractor
7. Langenback retractor
8. Suction tip, suction tube and stillete
9. Local anesthetic with adrenaline,
10. Mosquitoe forceps straight and curved
11. Stout artery forceps straight and curved
12. Saline bowls with saline and betadine
13. Resorbable vicryl suture material
14. Needle holder
15. Suture cutting scissors [4].

Case Description

All the patients described below had met with road traffic accident and sustained injury to the right side of the face. They developed haematoma over the right malar region which was associated with fractured undisplaced right zygomatico maxillary complex. All the cases were managed by a novel intraoral approach of haematoma evacuation. A 40 year old male patient came to the department of oral and maxillofacial surgery, Tamilnadu government dental college and hospital Chennai with a haematoma on the left malar region associated with fractured zygomatico maxillary complex following a road traffic accident [Figure I].



Figure I : Haematoma on the left malar region associated with fractured zygomatico maxillary complex

Under aseptic condition, posterior and middle superior alveolar nerve block was given, with the help of no. 15 BP blade incision was made on the upper right buccal sulcus above 25 and 26 region. Howarth elevator was inserted into the incision and the haematoma was evacuated. Later Rowes zygoma elevator was used to elevate the fractured right zygomatic arch and closure was done.[Figure II][Figure III]Another patient came with haematoma on the right malar region.The swelling appeared purplish blue on the outer side and it was soft and fluctuant. This patient was also treated similarly as mentioned before. [Figure IV][Figure V]



Figure II : Intraoperative picture



Figure III: Immediate post operative picture following haematoma evacuation



Figure IV : Haematoma on the right malar region



Figure V : Immediate post operative picture following haematoma evacuation

Surgical Procedure

Patients were painted and draped.[5] IV line was secured and fluids were administered. 2% xylocaine with adrenaline was used for giving infraorbital, posterior and middle superior alveolar nerve block. Intraorally an incision was placed at the height of the mucobuccal junction near the root apex of 15 and 16. Haematoma was evacuated using Hilton's method. [4] First mosquito artery forcep was opened a little and was inserted

into the incision made. Further planes were dissected and all the clots were removed out. After which a stout artery forcep was used to drain the remaining clots from the swelling. Copious irrigation with betadine and saline was done and closure was done with resorbable vicryl suture material.

Post-operative instructions were given as follows

1. Not to lie on the operated side
2. Liquid diet
3. Antibiotics and analgesics
4. Otrivin nasal drops

The outcome of the surgical evacuation of haematoma was uneventful with no paresthesia of soft tissue or nonvitality of the teeth postoperatively.

A Special Case

A 62 year old female patient was operated for sublingual adenoma[6] under general anesthesia. Patient was extubated after the surgical procedure and was shifted to the post operative ward. After one and a half hour, she developed a haematoma and the dorsum of the tongue almost touched the palate.[Figure VI].



Figure VI : Haematoma of floor of mouth pushing the tongue towards the palate

The patient was gasping for breath. Immediately I rushed to the patient and removed the sutures and sucked all the blood collected in the dead space in the right side of the floor of the mouth that was formed due to removal of the sublingual gland. The dead space was filled with gelfoam and was left open. [Figure VII]



Figure VII : Post operative picture after haematoma evacuation

Discussion

Usually we the dentists commonly encounter haematoma after giving a posterior superior alveolar nerve block due to puncturing of the pterygoid venous plexus. This situation is commonly managed by applying pressure and pressing it against the maxilla. The patient is put on antibiotics and analgesics and is reassured. The patient is also informed about the color change. Then within a time period of 2- 3 weeks it resolves on its own. Whenever we find a positive aspiration in the needle, we must make sure that a negative aspiration is achieved before injecting the local anesthetic solution [7].

Subdural haematoma is a life threatening variety of haematoma which when not drained or addressed leads to infarct of the brain and paralysis .It should be treated within the golden hour and the patient should reach the hospital on time for timely intervention [1].

Condylar fractures in children is commonly associated with haemarthrosis which progresses to cause ankylosis of the temporomandibular joint later managed by gap arthroplasty or interpositional arthroplasty [8].

Sublingual haematoma is a classical feature in parasymphysis fracture of mandible. In case of bilateral parasymphysis fracture sublingual haematoma is accompanied with fall back of tongue which leads to dyspnoea. It is an emergency situation which is managed commonly by tracheostomy. 1-0 silk suture can be placed near the tip of the tongue while it can be used to pull the tongue forward and can be secured to the patient's chest [9]. Severe bleeding in the floor of the mouth presenting with large-size haematoma involving submandibular, sublingual and submental spaces causes swelling of the floor of the mouth causing elevation and posterior displacement of the tongue resulting in upper airway obstruction similar to Ludwig's angina [10].

Conclusion

Being an oral and maxillofacial surgeon, incision and drainage of the clot must be done to avoid the following:

1. Swelling
2. Discoloration
3. Infection
4. Disfigurement of the face

Everyone wants to look beautiful, so first reassure the patient and then do the clot removal.

Conflict of Interest

NIL

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