

# Massive Submental Hematoma A Rare Complication After Osseous Genioplasty Literature Review and Case Report

## Abstract

Genioplasty is a procedure designed for correction of chin deformities, designed to achieve aesthetic objectives, without functional changes. There are few complications associated with genioplasty been reported in literature, including neurosensory disturbances, teeth apices injury, muscle dysfunctions (mentalis muscle ptosis) and relapses with a rare complication been reported including mucocele in the chin region. However this patient post-operative an eventful the time was in the hospital which was forty eight hours (48hours) then patient discharge home with antibiotic and pain medication. One week follow up patient presented with subcutaneous hematoma extended from sub mental to the xiphoid region.

**Keywords:** Genioplasty; Complications

## Case Report

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## Introduction

The chin is an important structure of maxillofacial complex; in maintain a harmony and esthetic proportion of the face. Few complications associated with genioplasty been reported in literature; the neurosensory disturbances are the most common complication were reported in a serial of patients. There is a risk of 10% to 20% of neurologic lesion in isolated genioplasty [1]. Other complications are chin's muscle dysfunctions and relapse.

## Case Presentation

A 24 years female patient was evaluated in a service of oral and maxillofacial surgery in preparation for orthognathic surgery, have been unsatisfied with her "excessive chin retrusion six month post bilateral sagittal split osteotomy" (Figure 1 & 2) The treatment plane was horizontal steotomy with 5 mm advancement genioplasty, (Figure 3). The mandibular vestibular approach was followed with two incisions, first incision in the labial mucosa, and the second incision in the mentalis muscle to periosteum Followed by minimal periosteal reflection then a horizontal osteotomy, 5mm below the root apices performed using a saw, then; the segment mobilized to the desired position which is 5 mm and fixed in place with 4 screws of 2.0 mm internal rigid fixation. Followed by simple interrupted suture to the mentalis muscle and continuous locking suture to the labial mucosa. The procedure was an eventful and only last thirty minutes. Patient was extubated and pushed to the anesthesia recovery room in very stable condition then after thirty minutes send to regular ward and stayed for forty eight hours then discharged with antibiotic (augmentin 625 mg for 7 days), pain medication (tramadol 50 mg for fifteen days). Also mouth washes for thirty days (30 days). Up on one week follow up patient presented with subcutaneous hematoma from

submantel region up to the xiphoid region. The entire laboratory preoperative is within the normal limit. The patient has no health significant diseases or bleeds disorders. When patient condition discovered blood work up for bleeding disorders is done and was in the normal limit. Therefore just followed until the hematoma subsided completely within four weeks.



**Figure 1:** Preoperative picture.



Figure 2: Postoperative landmark of the hematoma

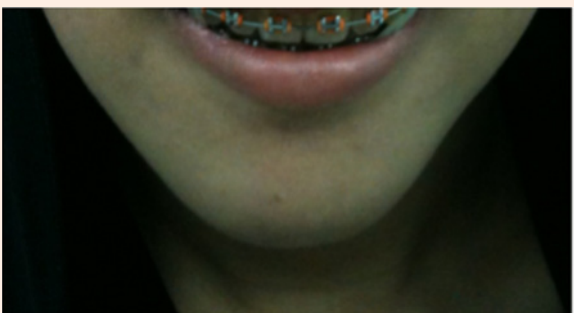


Figure 3: Postoperative the genioplasty.

## Results

On the first week follow up visit, patient notated a massive submental hematoma extended from submental up to the xiphoid

process, which resolved spontaneously with time. However until the discharge date post genioplasty nothing was notated on the patient like bleeding or hematoma. Also post bilateral sagittal split osteotomy was about six months prior no hematoma or bleeding. Upon follow up patient was very satisfied no complaint of any pain nor neurological deficit.

## Discussion

The chin is one of the facial structures most prominent and contribute to facial esthetic [1]. It is the most prominent and visible structures of the face, and the surgical modifications should pay attention in the alterations dentofacial harmony. Genioplasty is indicated to correct chin deformities in three dimensions: vertical, sagittal and transversal or combination of them [2]. Many techniques were described to advances, recues, superior and inferior chin reposition and corrections of chine asymmetries [3]. Many stabilization techniques have been used with genioplasty including stainless wires [4], Kirschner wire [5], Paulus' plate [6], screws of 2, 0 or 2, 4 mm associated with Miniplate [7], and resorbable Miniplate [8]. Complication frequently reported in association with genioplasty is the neurosensory alteration, have been reported the resolution of sensibility in 1year post-operative [9]. With a risk of 10% to 20% of neurologic lesion isolated performed genioplasty [10,11]. A combination of genioplasty and sagittal split osteotomy produced more lesions to lip sensibility [12]. Mucocele after chin augmentation using a nasal osseocartilaginous graft has been reported [13]. Chin's muscle dysfunctions secondary to improper suturing of the mentalis muscle, mentalis muscles suturing in genioplasty produce a superiors esthetics results [1]. The percentage of relapse with advanced genioplasty range between 2, 6% to 30% [14]. Lower-lip paresthesia occurred in 5.5% of the patients. Soft-tissue infection was reported in 3% of patients. With the undesirable aesthetic result including over advancement or hourglass deformity, been associated with errors in both treatment planning and technique [15].

## Conclusion

Genioplasty represents the most versatile procedure available to enhance the balance and proportion of the lower face. Thus like any surgical procedure carries risks such as muscles dysfunction, neurological deficit, teeth apices injury. Therefore this case has unusual hematoma extended from sub mantels region up to the xiphoid just subcutaneous. There were no signs and symptoms of short of dizziness the hemoglobin was 11.8 g/dl. The hematoma resolved with time about four weeks and did not leave any marks. The rust of the procedure was very satisfying for the patient, family and the surgeon. Beside the hematoma no other complications noted in this case. This kind of complication associated with genioplasty very rare. This is the first time such extensive subcutaneous hematoma reported due to genioplasty.

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