



## DO ANTIPLATELET DRUGS INCREASE THE RISK OF BLEEDING AFTER ALVEOLOPLASTY?:A CASE REPORT AND RATIONALE

### Dentistry

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### ABSTRACT

Pre-prosthetic surgery is done to facilitate fabrication of a prosthesis and improve facial form of the patient. The ultimate purpose is to eliminate pre-existing bony deformities and provide adequate soft and hard tissues for placement of complete dentures. In this case report a case of 40 year-old female under anti-platelet therapy reported in Oral and Maxillofacial Department with sharp bony spicules irt 22,43,45. Alveoloplasty was done for removal of bony spicules and contouring of the bone.

### KEYWORDS

Pre-prosthetic, Alveoloplasty, Antiplatelet therapy

### INTRODUCTION

The aim of Preprosthetic surgery is to eliminate biological obstructions, and reshape soft and hard tissues to receive better retention and stability to the prosthesis<sup>1</sup>. The ultimate goal should be rehabilitation of patient, with principal masticatory function as well as reestablishment and advancement of oral health and facial esthetics. Consequential maintenance of hard and soft tissue is prerequisite to attain this goal<sup>2</sup>.

Alveoloplasty is used to surgically recontour the alveolar process. Digital compression on lateral walls of bone is simplest form of alveoloplasty done after simple tooth extraction. Dean's alveoloplasty and its modifications are conservative techniques used when more irregularities are present. Secondary alveoloplasty is done after initial procedures to eliminate any gross bone irregularities. An incision on crest of the ridge is made, rongeurs, bone files or burs are used to remove sharp bony edges, when finished, the flap is repositioned and sutured.

Ischemia and organ infarction are caused by blood flow obstruction by a clot. Thrombus formation can happen at venous or arterial level as consequence of vascular injuries, activation of the clotting process and blood flow disruption. Cardiovascular diseases are caused by thrombus formation over an already present atherosclerotic plaque<sup>3</sup>. Therefore, antiplatelet therapy is used as primary prevention (prophylactic) and secondary prevention for number of thrombotic conditions<sup>4</sup>. They include aspirin, thienopyridines, phosphodiesterase inhibitors, which act upon different phases of activation<sup>3</sup>. Treatments carried out in patients under antiplatelet therapy imply a high risk of perioperative bleeding with an altered hemostasis<sup>5,6</sup>. 90% of post-operative bleedings are due to excessive surgical trauma, anatomical situation or not following post-operative instructions<sup>5</sup>. In light of these issues we must contemplate whether to halt or modify the therapy to prevent unfavourable or adverse final outcome.<sup>7</sup>

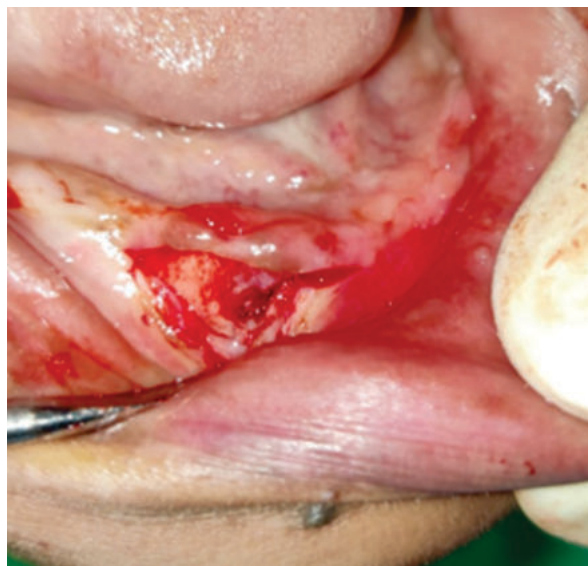
### CASE REPORT

A 40 years old patient under antiplatelet therapy (aspirin 75mg) presented with a chief complaint of discomfort and presence of bony spicules at upper and lower tooth region to Department of Oral and Maxillofacial surgery at GSL Dental College and Hospital. On intraoral inspection examination revealed an irregular alveolar ridge. Two projections were observed at labial region of 22 and on alveolar ridge region 43 and 45. On palpation, they were detected as bony projection at the same areas. Diagnosis was given as bony spicules in relation to 22, 43, and 45 (Fig1). Hence a pre-prosthetic secondary alveoloplasty was planned. Buccal and lingual infiltration was given and a full mucoperiosteal flap elevated by using surgical blade no 15 (Fig2). Removal of bony spicules was done by using bone rongeurs,

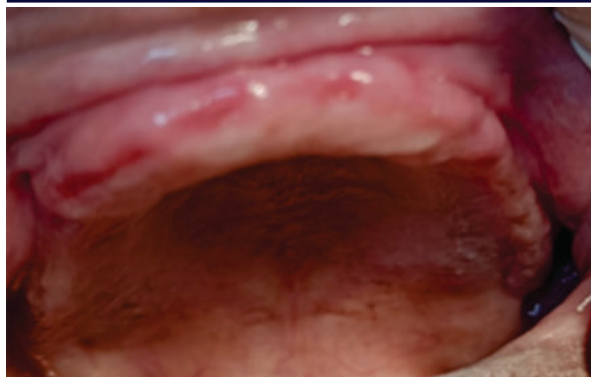
smoothing of bone was done using bone file. Botroclot liquid was applied on gauze and placed at surgical site and bleeding was manageable with hemostatic measures. Excessive bleeding was not seen near surgical site. When finished flap is repositioned and sutured. Postoperative healing was satisfactory after 15 days (Fig3).



**Figure 1 Pre-operative Clinical Image Showing Bony Spicules Irt 22,43,45**



**Figure 2: Elevation Of Periosteal Flap**



**Figure3: Post-operative Image Of Healing After 15 Days**

## DISCUSSION

Many patients undergo Minor oral surgical procedures for insertion of prosthesis<sup>1</sup>. Alveoloplasty is one such treatment, where removal of bony prominence, shaping and smoothening of bone is done to prepare the mouth for a denture<sup>2</sup>. In both medical and dental practice hemorrhagic event is most common postoperative fear. As less soft tissue is present, and surgical sites are frequently surrounded by bone tissue, digital pressure can be applied in most areas as hemostatic measure<sup>3</sup>.

Other measures such as hemostatic material application, sutures, pressure with a gauze, agents such as tranexamic acid can be used<sup>11</sup>. The possible consequences of discontinuing Anti platelet therapy should be considered<sup>12</sup>.

Medication such as aspirin cessation is associated with a threefold risk of developing cardiac events<sup>13</sup>. In our case minimal bleeding was observed as anterior region has no major blood vessels that bleed readily and also atraumatic procedure was followed. Looking at the toll that thrombotic events carry over patient's health, it would be rational to not alter or suspend anti-platelet therapy while executing surgical intervention, provided that it wouldn't constitute a notable risk of hemorrhagic complications.

## CONCLUSION

Proper performance of alveoloplasty prepares the alveolus to fit a removable dental prosthesis. By maximizing both hard and soft tissue bases for a removable denture, alveoloplasty allows for improvement of denture stability. Satisfactory alveoloplasty is vital to the success of removable dental prosthetic. It is unnecessary to interrupt antiplatelet therapy prior to minor dental procedures. The bleeding risk is very low with minimal dose of anti-platelet therapy and local hemostatic measures are usually successful. With the advent of newer antiplatelet drugs which are not associated with any significant bleeding, it will help clear this longstanding debate regarding the usage of antiplatelet medication prior to surgical procedures.

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