ORIGINAL ARTICLE

Common methods to arrest haemorrhage after tooth extraction in Dental out patient department

Yousuf A Lakdawala, Sabeen Masood, Sarah Jawed, Heebah Younus

Abstract

Objectives: Sometimes tooth extraction may lead to post-operative haemorrhage. We did this research in order to find out various methods to control post-operative haemorrhage after tooth extraction.

Study design: Descriptive cross-sectional study.

Place and Duration: This survey was conducted in the Altamash Institute of Dental Medicine, Karachi. The survey was started on 10th February 2019 and was completed on 20th March 2019.

Material and Methods: A total of 101 practitioners from Altamash Institute of Dental Medicine have participated in the study.A sample of 101 patients was selected by random sampling technique. A questionnaire was used to evaluate the methods used to control post-operative hemorrhage

Results: According to the results out of 101-practitioner's majority were females (77.6% females and 22.4% males). According to the study the first choice preferred by practitioners to control post-operative bleeding is by placing a gauze pack (54.5%). Other methods used include cautery, suture and ice bag.

Conclusions: The findings of this study concluded that management of post-operative hemorrhage is important as it can lead to serious complications.

Keywords: Haemorrhage, post-operative, extraction, primay haemorrhage, secondary haemorrhage.

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Altamash Institute of Dental Medicine, Karachi
YA Lakdawala
S Masood
S Jawed
H Younus

Correspondence:
Dr. Yousuf A. Lakdawala
Professor of General Surgery, Altamash Institute of Dental Medicine
Address: 92-B, Shabirabad, DBCHS Tipu Sultan Road, Karachi
Cell No:+92 321-2031609
email: youlak92@yahoo.com

Introduction

Haemorrhage refers to loss of blood. Haemorrhage can be classified on the basis of moment of incidence into primary, secondary and reactionary. Primary haemorrhage can take place during the surgical procedure on the other hand secondary haemorrhage occurs 24-hours after the surgical procedure. Reactionary haemorrhage arises within 24-hours of the surgical procedure.[1] Haemorrhage can also be classified on the basis of site, which includes soft tissue, bone or vessels.[2] Certain laboratory test can be done on patients at high risk of post-operative haemorrhage which are bleeding time, platelets count, prothrombin time and partial thromboplastin time.[3] The purpose of this article is to present the methods used to control post-operative hemorrhage after tooth extraction.[4] The factors that influence post-operative hemorrhage include medications, how the surgery was performed and the compliance of the patient.[4] There are several reasons that may result in post-operative haemorrhage after tooth extraction. These include increased vascularity of the tissues, the patient may dislodge the clot with the tongue, the patient did not follow post-operative instructions such as not keeping the gauze for 30 minutes at the extraction site, drinking with a straw or spitting, smoking, consuming hot beverages, sometimes salivary enzyme can cause the lysis of clot preventing the clot from forming. Postoperative haemorrhage should treat as an emergency as it can result in complications ranging from soft tissue hematomas to severe

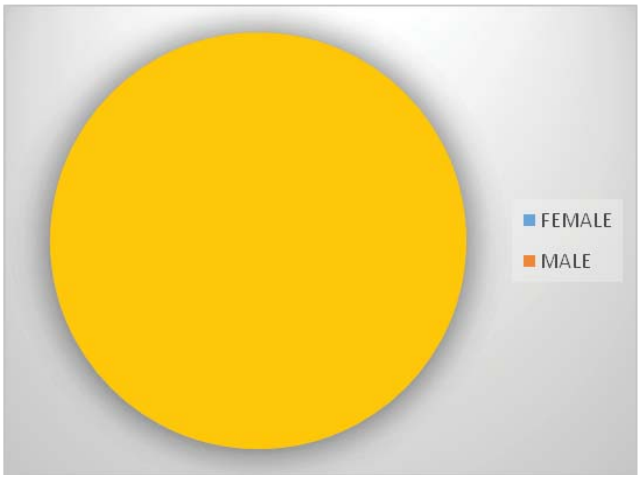

Figure 2: *Gender Distribution*

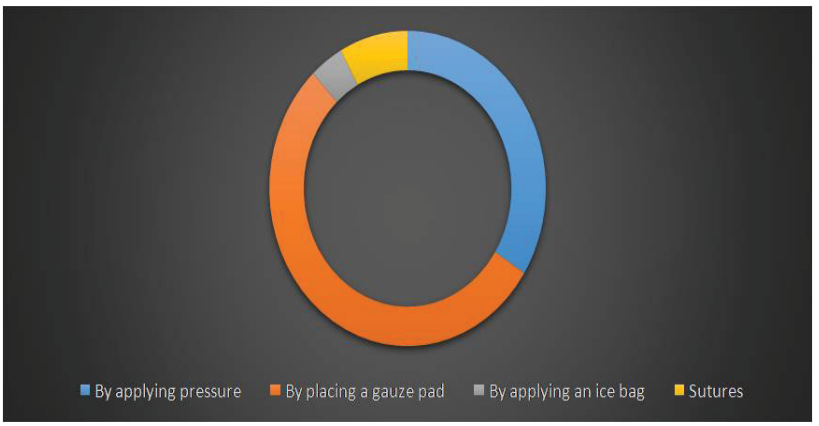

Figure 2: *Common Methods to Stop Bleeding After Tooth Extraction*

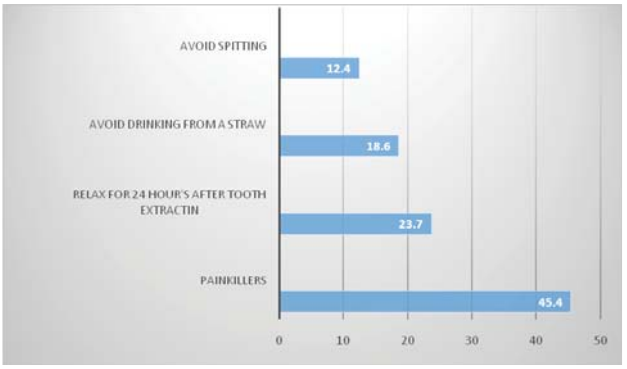

Figure 3: *Post-Operative Instruction*

blood loss.[5] Hypovolemia can result from extensive blood loss so it is essential to prevent blood loss by proper hemostatic measures.[6] To reduce the chances of post-operative haemorrhage a proper medical and dental history should be taken in addition with significant dental examination.[1]

Material and Methods:

This survey is based on a cross-sectional study that was carried out in one of the leading dental institution and was conducted from 10th February 2019 to 20th March 2019 to determine the-ways of how to stop haemorrhage or bleeding after the tooth is extracted from the socket among dental students, house officers and demonstrators at Altamash In-stitute of Dental Medicine (AIDM). Data was collected using a self-administered structured questionnaire and analyzed by using SPSS version 20.

Self-reporteed questionnaire consisting of 13-questions in English language was made and distributed. A sample of 101 participants was selected by random sampling technique. The questionnaire was filled by a total of 101 students, house officers & demonstrators of Altamash institute of dental medicine. The questionnaire that was given had two main parts. The first consisted of questions about the candidate's socio-demographic status mainly age, gender, and qualification. Second part consists of questions related to different method of haemorrhage control.

Results:

In this study, out of 101 participants majority were females (77.6% females and 22.4% males). Majority of students amongst the two age groups were in 21-28 years age group (73.2%) followed by 18-20-year age group (26.8%). Students of third year were 34 (30.9%), 49 (44.6%) of fourth year, house officers 17(15.45%), demonstrators 6 (5.5%) & others 4 (3.63%).

On evaluation it was revealed that after a tooth is pulled out the dentist stops the bleeding by applying the pressure 34.3%, by placing a gauze pad (54.5%), sutures (8.1%) and by applying an ice bag (4%). Post-operative instructions given to the patient by the dentist were pain killers to 12(12.4%), they ask the patient to relax for 24 hours 24 (23.7%), patients are advised not to drink from the straw 19(18.6%) and to avoid

spitting 45(45.4%).

Discussion:

Around the world many methods are used by the dentist to stop the bleeding after a tooth extraction. Contemporary methods include; applying an ice pack to the affected area immediately after the procedure to keep down swelling. Asking the patient to bite firmly but gently on the gauze pad placed by the dentist to reduce bleeding and allow a clot to form in the tooth socket. To avoid rinsing or spitting forcefully for 24 hours after the extraction to avoid dislodging the clot that forms in the socket. Asking the patient not to smoke, which can inhibit healing and to avoid drinking from a straw for the first 24 hours.

Following favourable results from a previous study held in (Padova, Italy), a case-control study was performed to further assess the incidence of bleeding complications after dental extraction in patients. Local haemostatic measures (i.e. fibrin sponges, sutures and gauzes saturated with tranexamic acid) were adopted. All the procedures were performed in an outpatient setting. No post-operative late bleeds requiring hospitalisation and/or blood transfusions were recorded, and the adjunctive local haemostatic measures were adequate to stop the bleeding.[7]

Another study involving 100-patients was conducted who underwent tooth extractions. Purpose of this study was to measure the frequency of bleeding during and after tooth extraction in the patients. Data analysis considered the presence of comorbidities as the primary predictor for bleeding; additional predictors were age and gender.[8]

A prospective trial conducted by Cardona-Tortajada et al. involving 155-patients on antiplatelet therapy confirmed that local measures to achieve haemostasis are sufficient to control post-operative haemorrhage after tooth extraction. It is advisable to minimize the surgical trauma by minimizing the number of teeth to be extracted at a time. It has been recommended that three single rooted teeth and two molars either adjacent or correlative to each other should be extracted during a single visit.[9] In another study the effect of green tea extract on cessation of bleeding and oozing after removing of mandibular molars was investigated. This study showed that green tea extract contributes to significant decline in bleeding of the socket caused by tooth extraction as well as reduction of oozing.[10]

Another study was conducted to evaluate post-operative bleeding in patients treated with oral anticoagulant drugs who underwent dental extractions without interruption of the treatment. Local haemostasis was carried out as follows: gelatin sponge, sutures, and mouth wash with tranexamic acid & it was concluded that dental extractions can be performed without interruption in patients treated with oral anticoagulant.[11] A study was conducted on patients who underwent tooth extraction and the local haemostatic measure used was fibrin glue. It was revealed that the use of fibrin glue is safer for individuals with bleeding disorders.[12]

Another study conducted in Tokyo (JAPAN) revealed amicable results for patients undergoing tooth extraction and predicting post-tooth extraction bleeding in patients undergoing warfarin treatment.[13]

Conclusion:

Bleeding secondarily to oral surgical interventions is still an important topic although numerous papers as well as guidelines are written about it. The conclusion of this research was bleeding after tooth extraction could be handled in an outpatient setting with simplest surgical interventions i.e. (bite swab with or without tranexamic acid, suture, ice pack and fibrin sponges placed by a dentist/surgeon).

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Dr Yousuf A Lakdawala, supervisor, topic selection proof reading.

Dr Sabeen Masood, article writing, statistical

analysis, layout of the article, collection of references.

Sarah Jawed, data collection, article writing, statistical analysis, collection of references.

Heebah Younus, data collection, article writing, collection of references

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