

Practices and Perceptions of Dental Surgeons to Patients on Blood Thinners

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ABSTRACT

Objective: This article focuses on the mixed perceptions of the dentists in treating patients on blood thinners and the awareness amongst them regarding protocol and management of such patients.

Study Design: Cross-sectional descriptive and analytical study

Place and Duration of Study: This study was conducted at Jinnah Medical and Dental College from August 2013 to December 2013. The data was collected from three dental colleges of Karachi.

Material and Methods: The study was conducted at Jinnah Medical and Dental College. A 17-item questionnaire was used to collect the data. The data was collected from three dental colleges of Karachi to evaluate the dentist's perception and protocols put into practice related to patients on blood thinners. The study included 92 dentists. The data was stored in excel worksheet and was analyzed using SPSS.

Results: Amongst the 92 dental practitioners evaluated in the research 50% advised their patients to stop antiplatelet therapy prior to a dental procedure. 64.13% of the dentists were of the opinion that antiplatelet therapy be stopped before performing any treatment 94.56% of the dentists said they are aware of the reasons why patients are kept on anticoagulant drugs. Based on the data collected 67.39% of the dental practitioners delayed the treatment for patients taking blood thinners 95.65% referred the patients to their cardiologist prior to an invasive treatment. The optimal range of INR was known by 84.78% of practitioners.

Conclusion: Dental practitioners in this study population display a wide range of practice in their approach to patients on blood thinners. A trend towards overly conservative management is seen in the former. In contrast, the approach to the patients appeared to be haphazard, with about 20% of those never checking the INR pre-operatively. There is a clear need for greater awareness of an evidence-based approach to the dental management of this unique patient group to avoid unnecessary and preventable complications. There is an acute need for creating awareness and adherence to the new guidelines for safe and effective practice.

Key Words: Blood thinners, Latest guidelines, Dental management.

INTRODUCTION

Blood Thinners are being widely prescribed for various medical conditions such as atrial fibrillation, multiple venous thromboembolism and other valvular-dysfunctions, such patients undergo dental procedures in a routine.¹ Although bleeding or hemorrhage can occur in such patients there still remains controversy regarding the anticoagulation protocol that should be followed when considering patients who have to undergo extensive dental treatment.^{2,3}

A group of dentists believe that the anticoagulation protocol should not be altered while others are of the opinion that anticoagulation therapy should be stopped for some period of time before any surgical procedure be carried out.⁴ Currently it remains a question whether the dental treatment should be carried out whilst the patient is on anticoagulation therapy or should it be stopped prior to a dental invasive procedure.⁵

This article focuses on the mixed perceptions of the dentists in treating patients on blood thinners and the awareness amongst them regarding protocol and management of such patients.

MATERIALS AND METHODS

The study was conducted at Jinnah Medical and Dental College. A 17-item questionnaire was used to collect the

data. The data was collected from three dental colleges of Karachi to evaluate the dentist's perception and protocols put into practice related to patients on blood thinners. The study included 92 dentists. The data was stored in excel worksheet and was analyzed using SPSS.

RESULTS

Amongst the 92 dental practitioners evaluated in the research 45.65% of them were into dental practice for less than 3 years while the other 23.91 % had been working for less than 5 years, 15.21% for more than 5 years and 13% percent for more than 10 years. 31.52% of them belong to the operative/endodontics specialty and the same ratio of general practitioners while 7.60% ,6.52% 2.17% and 8.69% belong to orthodontics, prosthodontics, periodontology and surgery respectively. Amongst the 92 dental practitioners that were evaluated 50% advised their patients to stop antiplatelet therapy prior to a dental procedure. 64.13% of the dentists were of opinion that antiplatelet therapy be stopped before performing any treatment that comes under surgery e.g. extractions, while 1.08% and 2.17% of the dentists recommend that the therapy be stopped before any treatment involving operative and periodontal problems respectively. None of the dentist was of the opinion of stopping an antiplatelet therapy prior to orthodontic or prosthodontic treatment.

94.56% of the dentists said they are aware of the reasons why patients are kept on anticoagulant drugs. Based on the data collected 67.39% of the dental practitioners delayed the treatment for patients taking blood thinners while the remaining 29.34% did not delay any treatment amongst them 95.65% referred the patients to their cardiologist for a consent prior to an invasive treatment. 95.65 % of the dentists were aware of the consequences of stopping an antiplatelet therapy, 93.47% had knowledge about the precautions taken while treating patients on blood thinners. Amongst these dentists 42.39% of them had encountered patients with severe bleeding. The optimal range of INR was known by 84.78% of practitioners. 35.86% of the dentist say that bleeding is best managed by pressure pack, 29.34% think it is managed best by sutures, Surgicel (7.60%), transamine (20.65%), electrocautery (3.25%) & FFPs (1.08%). A high ratio 80 % of dentists encounter patients who are hypertensive or have

coronary artery disease while only a few 15.21% do not experience patients with similar conditions.

Table No.1: Recommendations for the management of patients on anti-platelet agents.

Patients on a single anti-platelet agent Do not stop for dental procedures
Patients on concurrent aspirin and dipyridamole Do not stop for dental procedures
Patients on concurrent aspirin and clopidogrel Consult with the patient's cardiologist Patient may need referral to the dental hospital for the invasive dental procedure

Adapted from: **Randall, C., (ed.).** Surgical management of the primary care dental patient on antiplatelet medication. 2007. A guideline revision is due in late 2009 and will be available at:
<http://www.ukmi.nhs.uk/activities/specialistServices>

Table No.2: Percentage wise opinion of dentists about different dental problems

No	Question	Result	
1	Do you advise to stop antiplatelet drugs before a dental treatment?	Yes	No
		50%	50%
2	If yes which dental treatment / s will require stopping antiplatelet therapy a) Oral surgery b) Operative dentistry c) Periodontics d) Endodontic e) Orthodontic f) Prosthodontic	a) 64.13% c) 2.17% e) 0%	b) 1.08% d) 0% f) 0%
3	Are you aware of reasons for antiplatelet therapy?	Yes	No
		94.56%	5.43%
4	Do you know any common blood thinners?	Yes	No
		100%	0%
5	According to you should treatment be delayed for patients receiving antiplatelet therapy?	Yes	No
		67.39%	29.34%
6	Is it important to consult a cardiologist before interrupting antiplatelet medication(s)?	Yes	No
		95.65%	4.34%
7	Do you know the consequences of interrupting treatment with blood thinners?	Yes	No
		95.65%	3.26%
8	Are you familiar with the precautions taken while treating patient receiving antiplatelet therapy?	Yes	No
		93.47%	5.43%
9	Have you ever encountered a patient with severe bleeding during dental treatment, who was under antiplatelet therapy?	Yes	No
		42.39%	56.52%
10	Do you know the optimal INR for Dental surgical procedures?	Yes	No
		84.78%	14.13 %
11	Post -op bleeding in a patient taking anti-platelet therapy is best managed by a) pressure pack b) sutures c) surgicel d) transamine e) electrocautery f) FFPs	a) 35.86% c) 7.60% e) 3.26%	b) 29.34% d) 20.65% f) 1.08%
12	Do you usually experience patients taking blood thinners who are hypertensive or have any coronary artery disease?	Yes	No
		80.43%	15.21%
13	How long have you been into dental practice? a) <3yrs b) <5yrs c) >5yrs d) >10yrs	a) 45.65% c) 15.21%	b) 23.91% d) 13.04%
14	What is your specialty? a) operative / endo b) G.P c) orthodontics d) prosthodontics e) periodontics f) oral surgery	a) 31.52% c) 7.60% e) 2.17%	b) 31.52% d) 6.52% f) 8.69%
15	The best remedy usually adopted for managing post dental treatment bleeding at home a) pressure pack b) applying ice c) biting on teabag d) eating ice-cream	a) 50% c) 19.56%	b) 10.86% d) 14.13%
16	For how long will you stop the antiplatelet therapy prior treatment a) 2days b) 3days c) 4days d) 5days e) 6days f) 7days	a) 21.17% c) 2.17% e) 2.17%	b) 23.91% d) 9.78% f) 8.69%
17	Do you know normal values of CT, BT, PT and INR	Yes	No
		82.60%	17.39%

78.26% of the practitioners said that patients undergoing antiplatelet therapy are best managed at hospital. Dentist who believe that the antiplatelet therapy should be stopped for 2 days are 27.17% while 23.91%, 2.17%, 9.78%, 2.17% 8.69% advice that the antiplatelet therapy should be discontinued for 3, 4, 5, 6 and 7 days respectively prior to an invasive dental procedure. Results are shown in table 2.

DISCUSSION

Every year it is estimated that about 800,000 people worldwide undergo a non-surgical coronary artery interventional procedure and most patients with stents are maintained on an anti-platelet regimen.⁶ It is therefore extremely likely that dental practitioners will encounter these patients on a regular basis. The management of patients on anti-platelet agents dental care may be both inappropriate and inconsistent, as demonstrated by our limited study. The majority of respondents prefer to stop patients' anti-platelet agents prior to extraction. This practice is at variance with the current literature, which argues that the interruption of therapy may expose such patients to an increased risk of developing adverse cardiovascular events.⁷

This study showed that of those dentists who stop anti-platelet agents, 95% do so in conjunction with the patient's medical practitioner. It is proposed that the study population's practice of withdrawing therapy is based on evidence other than current guidelines from the dental literature. Furthermore, the practice of withholding anti-platelet agents in the post-operative period has no foundation in the current literature and should be strongly discouraged.⁸

Recommendations for the management of dental patients on anti-platelet agents are seen in Table 1. In 2007, the British Committee for Standards in Haematology (BCSH) Task Force on Haemostasis and Thrombosis, together with the British Dental Association and the National Patient Safety Agency, developed evidence-based guidelines for managing patients on warfarin.⁹

The guidelines clearly state that the risk of significant bleeding in patients taking warfarin and with a stable INR of <4 is very small. The guidelines stress that the risk of thrombosis may be increased in patients whose warfarin is stopped prior to dental surgery. Indeed, fatalities due to thrombo-embolic events have been documented as a result of stopping warfarin prior to invasive dental surgery.¹⁰ The guidelines unambiguously state that the patient should have his or her INR measured within the 72 hours preceding the procedure and ideally within 24 hours.¹¹

This study revealed that this guideline was not adhered to by 20% of respondents. This study had several weaknesses. One was the small sample size, which

always limits the value of reporting the means in a descriptive analysis.

CONCLUSION

Dental practitioners in this study population display a wide range of practice in their approach to patients on blood thinners. A trend towards overly conservative management is seen in the former. In contrast, the approach to the patients appeared to be haphazard, with about 20% of those never checking the INR pre-operatively. There is a clear need for greater awareness of an evidence-based approach to the dental management of this unique patient group to avoid unnecessary and preventable complications. There is an acute need for creating awareness and adherence to the new guideline for safe and effective practice.

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