Research Article

Knowledge, Attitude, Practice among Dental Students Regarding Management of Patients Undergoing Anticoagulant Therapy - A Survey

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ABSTRACT

Oral anticoagulation with vitamin K antagonist is widely prescribed for various medical conditions, including artrial fibrillation, multiple venous thrombo embolism, and artificial heart valves. It is mostly recommended that the anticoagulant therapy should be discontinued prior to any dental procedure due to progressive or haemorrhage like complications when considering aggressive or invasive dental treatment. The aim of study is to evaluate the knowledge and attitude of dental students towards patients undergoing therapy in their clinical practice and to assess the need for additional education in this area. A self-administered questionnaire was distributed among dental students of various colleges to assess their knowledge, attitude and practice regarding anticoagulant dental treatment. A total of 100 questionnaires were distributed and were return complete. Students most recommended anticoagulant, was Aspirin which was about (85%) followed by warfarin (33%), clopidrogel (24%) and others. According to majority of student's opinion, discontinuation of anticoagulants differ with different dental treatment procedures. The findings of the study resulted that the students have high level of knowledge about anticoagulants. Further, educational programs should be used to improve students' knowledge and attitude about anticoagulants.

Keywords: Anticoagulants, Aspirin, Clopidrogel.

INTRODUCTION

Thrombotic and thromboembolic occlusions of the blood vessels are the main cause of ischaemic events in the heart, lung and brain. since the observation that thromboembolic occluding arteries were rich in platelets, antiplatelet agents and anticoagulants have been extensively researched and developed as potential therapies for the prevention and management of arterial thrombosis.[1] The aim of oral anticoagulant therapy (OAT) is to reduce blood coagulability to an optimal therapeutic range within which the patient is provided some degree of protection from thromboembolic events.[2] Anticoagulation therapy is one of the most prevalent forms of treatment used in contemporary medicine. With the increasing age of the population and the high incidence of cardiovascular diseases in developed societies, millions of subjects adhere to some protocol of anticoagulant therapy.[3] In clinical practice, the management of patients on anticoagulant therapy who require dental procedures varies considerably.[4] Dental students were either not aware of the official recommendations or had difficulties in adapting these to clinical practice. The objective of this study was to assess the management of patients on anticoagulants by dental students in Saveetha Dental College and to evaluate their knowledge and attitude which might affect this practice. [5]

MATERIALS AND METHODS

The study was conducted during the academic year November 2016 among the dental students who were attending the third year, final year, and internship (fifth year trainee) of undergraduate program in Saveetha Dental College and Hospital, Saveetha University, Chennai. A self-administered questionnaire was developed to assess how students manage patients who take anti-platelet agents or warfarin. To assess validity, the questionnaire was administered among 100 undergraduate dental students who are under their clinical practice. The questionnaire was designed to collect the data regarding the knowledge of dental students about antiplatelet drugs, their attitude and practices when treating patients on antiplatelet therapy. The data from the participants were collected, statistically analyzed, and results were obtained.

RESULTS

In this study, about 55% of the dental student's responded aspirin to be the most recommended antiplatelet drug which reduces the risk of recurrent heart attack and ischemic stroke and 33% of students answered that warfarin is the next recommended drug followed by 24% of clopidogrel. (fig-1)

According to students opinion, about 43% preferred that the discontinuation of anticoagulants differ with different dental treatment procedures and 32% of students always preferred to stop anticoagulants therapy and 16% of students preferred never to stop medications while others answered don't know when to discontinue the therapy.(fig-2)

Around 52% of students have stated that minor surgical procedures cannot be carried out safely, without stopping the antiplatelet medication. About 76%of participants

have agreed that continuation of antiplatelet drugs during dental treatment increases significant bleeding hence, should be stopped. 71% of them preferred to refer the patient to physician/cardiologist while treatingpatients on antiplatelet medications.[6]

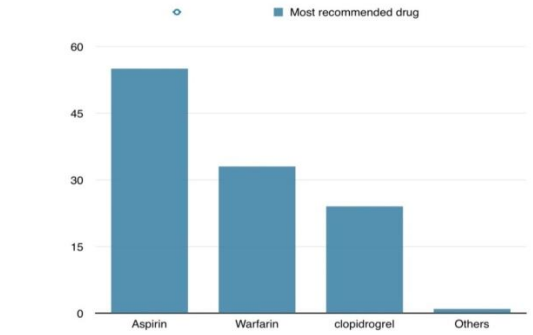

Figure-1

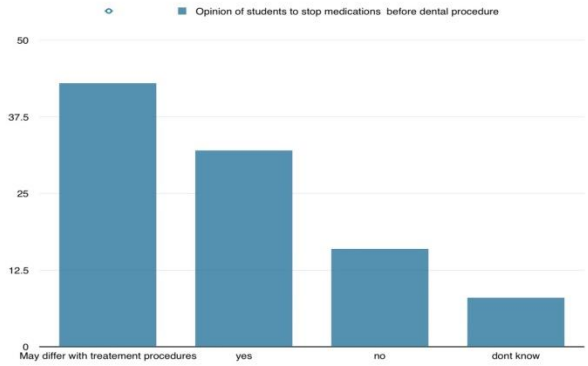

Figure-2

DISCUSSION

Many studies have recommended that dental extractions can be carried out safely without discontinuation of antiplatelet therapy[7-9]. Bingjie Zhao et al.[10] from their meta-analysis stated that they could not conclude that bleeding time or the extent of haemorrhage in dental extraction are prolonged when patients are on long-term aspirin therapy and recommend not to stop antiplatelet drugs before tooth extraction and that the hemostasis method be enhanced. Whereas the results of this study showed that most of the students preferred that the discontinuation of anticoagulants differs with different dental treatment procedures. This is in accordance with the study by Shah et al.[11] in which they evaluated the knowledge of dental practitioners toward the dental management of patients who are on anticoagulant and/or antiplatelet agents and concluded dentists and medical practitioners showed a wide range of different approaches in terms of knowledge related to management of patient taking anticoagulant and/or antiplatelet medication before dental treatment and emphasizes the need to educate dental practitioners to use evidence-based guidelines for management of such patients.[6]

CONCLUSION

The overall findings of this study show that educational programs about anticoagulation should be carried out to improve students' knowledge and attitudes about management of patients on anticoagulants.

REFERENCES

1. Mariele Pototski, Jose M.Amenabar. Dental management of patients receiving anticoagulation or antiplatelet treatment. Journal of Oral Science, Vol.49, No.4, 253-258, 2007.
2. Doron J. Aframian, DMD, PhD,a Rajesh V. Lalla, BDS, PhD,b, Douglas E. Peterson, DMD, PhD,c Jerusalem, Israel, and Farmington, CT. Management of dental patients taking common hemostasis altering medications. OOOOE, Volume 103, Number 3, Suppl 1.
3. Madrid C, Sanz M. What influence do anticoagulants have on oral implant therapy? A systematic review. Clin. Oral Impl. Res. 20 (Suppl. 4), 2009; 96–106. doi: 10.1111/j.1600-0501.2009.01770.x
4. Adeela Nematullah, BHSc; Abdullah Alabousi, BHSc; Nick Blanas, BSc, DDS, FRCD(C); James D. Douketis, MD, FRCP(C); Susan E. Sutherland, DDS, MSc. Dental Surgery for Patients on Anticoagulant Therapy with Warfarin: A Systematic Review and Meta-analysis. JCDA, February 2009, Vol. 75, No. 1.
5. Santhosh kumar mp. Knowledge, attitude and practices of dental students toward dental management of patients on antiplatelet therapy. Asian J Pharm Clin Res, Vol 9, Issue 3, 2016, 270-276.
6. Napeñas JJ, Oost FC, DeGroot A, Loven B, Hong CH, Brennan MT,bet al. Review of postoperative bleeding risk in dental patients on antiplatelet therapy. Oral Surg Oral Med Oral Pathol Oral Radiol 115(4), 2013, 491-9.
7. Brennan MT, Valerin MA, Noll JL, Napeñas JJ, Kent ML, Fox PC, et al. Aspirin use and post-operative bleeding from dental extractions. J Dent Res 87(8), 2008, 740-4.
8. Bajkin BV, Bajkin IA, Petrovic BB. The effects of combined oral anticoagulant-aspirin therapy in patients undergoing tooth extractions:A prospective study. J Am Dent Assoc 143(7), 2012, 771-6.
9. Zhao B, Wang P, Dong Y, Zhu Y, Zhao H. Should aspirin be stopped before tooth extraction? A meta-analysis. Oral Surg Oral Med Oral Pathol Oral Radiol 119(5), 2015, 522-30.
10. Shah AH, Khalil HS, Alshahrani FA, Khan SQ, AlQthani NR, Bukhari IA, et al. Knowledge of medical and dental practitioners towards dental management of patients on anticoagulant and/or antiplatelet therapy. Saudi J Dent Res 6, 2015, 91-7.
11. Y. Martínez-Beneyto, Ph.D., D.D.S.; P. López-Jornet, Ph.D., M.D.S.; F. Camacho-Alonso, Ph.D., D.D.S.; M. González-Escribano, D.D.S. Dental Students' Knowledge of and Attitudes Toward Anticoagulation Dental Treatment: Assessment of a One-Day Course at the University of Murcia, Spain. Journal of Dental Education, Volume 76, April 2012, Number 4, 495-500.

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