Evaluation of Gum Bleeding in Patients Taking Oral Anticoagulants Therapy with Risks of Venous Thrombosis

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Abstract

Introduction:

Anticoagulants play an important role in treatment to prevent the incidence of atherothrombotic events in patients on risks of cardiovascular, cerebrovascular and peripheral artery diseases. On the other hand, due to the use of these anticoagulants patients also present with some hemorrhagic conditions out of which epistaxis and bleeding gums are the most common.

Objectives: The purpose of this study was to identify the risk factors and side effects of anticoagulants in patients taking anticoagulant therapy.

Material and methods:

This study was conducted in a tertiary care hospital during June 2021 to June 2022.

All the ethical measures were taken before research. Only the patients with risks of athero-thrombotic events were included. A total of 200 patients meeting the inclusion and exclusion criteria were enrolled in the study.

Detailed history and physical examination were done to meet the inclusion and exclusion criteria. Informed consent was obtained.

Results: The data was collected from 200 patients. The average age was 32.67±2.56 years. The mean bleeding time was 18.5 ± 6.2 min, varying from 5 min to 22 min. The bleeding incidence was 33%. Out of 200 patients, 17 patients had a bleeding time of more than 21.5 min but less than 25 min, 5 patients had minor bleeding and 1 patient had blood in urine due to internal bleeding which ceased after the termination of anti-platelet agents.

Conclusion:

Safety measures should be considered with adjacent dose in patients taking anticoagulant therapy. Patients should be counselled about acute hemorrhagic events and initial procedures.

Key Words: Gum Bleeding, Anticoagulant therapy, Atherothrombosis.

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Introduction:

Oral anticoagulants are in use from decades to prevent thrombotic events in patients with clinical history of prescribed therapy. Patients on anticoagulant therapy should be routinely advised for regular checkup. Vitamin k should be advised and patients should be counselled when to start and

when to stop the use of anti-coagulant therapy before and after any surgical procedure. Patients with history of ischemic heart disease and cerebrovascular incidents, venous thrombosis are prescribed with the anti-coagulant therapy. Aspirin and warfarin are most commonly used therapy. If patients have no genetic deficiency of any coagulation factor, then hemorrhagic events are self-limited. Their bleeding time is self-limiting and they are managed. Anti coagulates have become necessary in patients to control the risk factors. (1)

Due to recent advances in the field of medicine use of anticoagulants has become a great protocol. In many surgical procedures anticoagulation therapy is also given as prophylaxis. (2)

To minimize the effect of hemorrhagic conditions like epitaxies and gum bleeding patients are treated with vitamin K. In case of complications due to use of therapy such as gum bleeding, it is advised to treat the patients with single dose of vitamin k. (3)

Many oral anticoagulants and oral antiplatelets are available. (4)

Dental clinicians and medical practitioners have lack of medical knowledge regarding the treatment of patients with bleeding. They have less practice to manage the patients with acute history of minor bleeding. (5)

Bleeding time of the patient's complete history should be taken when presented with minor hemorrhagic conditions. Dental health issues and gum bleeding should be evaluated on clinical conditions. Initial dose of vitamin K coverage with antibiotics and proper future initial treatment should be advised. (6)

Objectives:

Main objective of the study is:

- To evaluate the incidence of gum bleeding in patients taking anticoagulant therapy

Material and methods:

Data collection:

Clinical Correlation with bleeding time by Iwabuchi et al. (7)

0 No bleeding.

1 Adequate hemostasis, blood clot is present.

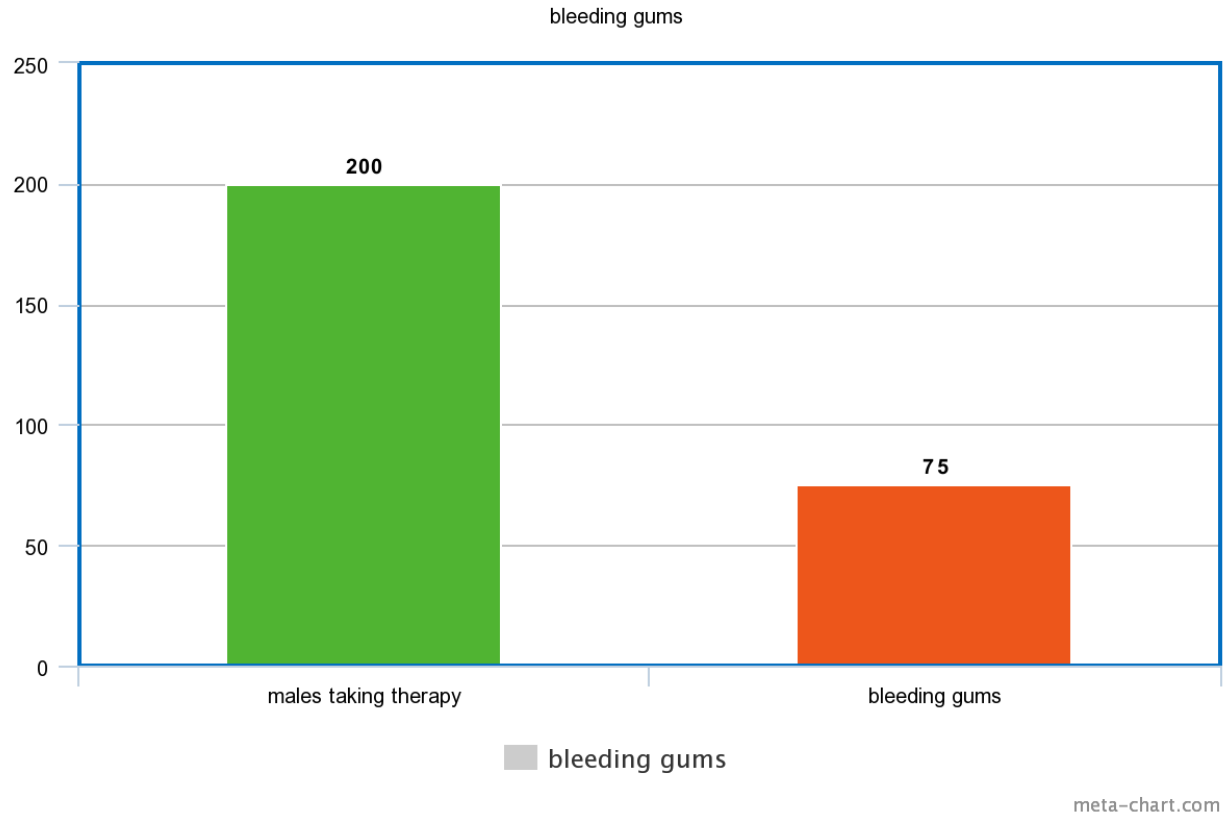
2.1 Hemostasis was reached after the compression of the wound for more than 30 min.

2.2 Blood oozing in regions where hemostasis was achieved the next day or the same day of the tooth extraction using compression.

3 Hemostasis was achieved by procedures that differ from compression.

The sample was consisting of 200 patients taking therapy and identify with gum bleeding. Out of 200 male patients 75 patients came with gum bleeding. As shown in graph 1.

Graph no.1



Results

The data was collected from 200 patients. The patients were aged 35 to 70 years of age and taking anticoagulation therapy to reduce thrombotic events.

Discussion:

Considering the results of this retrospective clinical study, we can conclude that bleeding complications in anticoagulated patients are a higher incidence. More studies are needed with larger samples and standardized methodologies, so new scientific evidence about the clinical management of these new drugs can be generated. New formulas and drugs should be used.

[7, 8]. These new compounds have many indications for example they are used as direct FXa inhibitors, encouraging evidence is also emerging on some antithrombotic molecules and aptamers targeting intrinsic pathway factors (i.e., FIXa, FXIa, and FXIIa) in the acute treatment of deep vein thrombosis (DVT) and pulmonary embolism (PE) and venous thromboembolism (VTE) prophylaxis after orthopedic surgery [8, 9]. Lower doses of medicines are prescribed for old patients or those with renal issues [10].

Antonino and his colleagues conducted research and found a strong correlation between LTA and flow cytometric measurements [11]. Gremmel et al. found that the results from 4 different assays of platelet function significantly correlated with LTA, few published studies have demonstrated the clinical applicability of FCA assay; studies comparing the results of LTA and FCA assay in bleeding patients for diagnosing underlying platelet function defects (PFD) are limited. Hence,

this study was aimed to evaluate the clinical utility of FCA assay for detecting PFDs and to correlate the results obtained with those of LTA [12]. Recently, Bonello et al. provided a consensus opinion on the definition of high on-treatment platelet reactivity to ADP based on various methods reported in the literature and proposed LTA as 1 of the 4 tests associated with clinical risk. Very recently, Parodi et al. found that high residual platelet reactivity assessed by LTA and ADP as an agonist among patients receiving clopidogrel after percutaneous coronary intervention (PCI) has been associated with a high risk of ischemic events at short- and long-term follow-up [13].

CONCLUSION

According to the results and previously performed research the conclusion of our study was that most dental procedures can be performed without interfering with antithrombotic therapy. Further studies and supportive studies are required to develop guidelines for the peri-procedural antithrombotic therapy of patients who are receiving direct oral anticoagulants.

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Conflict of Interest
The authors declare no conflicts of interest.

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References

1. Mirkhel, Ahmadshah, et al. "Frequency of aspirin resistance in a community hospital." The American journal of cardiology 98.5 (2006): 577-579.
2. Devani, P., K. M. Lavery, and C. J. T. Howell. "Dental extractions in patients on warfarin: is alteration of anticoagulant regime necessary?." British Journal of Oral and Maxillofacial Surgery 36.2 (1998): 107-111.
3. Bajkin, Branislav V., Stevan L. Popovic, and Srecko DJ Selakovic. "Randomized, prospective trial comparing bridging therapy using low-molecular-weight heparin with maintenance of oral anticoagulation during extraction of teeth." Journal of oral and maxillofacial surgery 67.5 (2009): 990-995.
4. Cannon, P.D. and V.T. Dharmar, *Minor oral surgical procedures in patients on oral anticoagulants--a controlled study.* Aust Dent J, 2003. **48**(2): p. 115-8.
5. Morimoto, Y., H. Niwa, and K. Minematsu, *Hemostatic management of tooth extractions in patients on oral antithrombotic therapy.* J Oral Maxillofac Surg, 2008. **66**(1): p. 51-7.

6. Costantinides, F., et al., *Managing patients taking novel oral anticoagulants (NOAs) in dentistry: a discussion paper on clinical implications.* BMC Oral Health, 2016. **16**: p. 5.
7. . Iwabuchi H., Imai Y., Asanami S., Shirakawa M., Yamane G.Y., Ogiuchi H., Kurashina K., Miyata M., Nakao H., Imai H. Evaluation of postextraction bleeding incidence to compare patients receiving and not receiving warfarin therapy: A cross-sectional, multicentre, observational study.
8. Lippi, G., R. Gosselin, and E.J. Favaloro, *Current and Emerging Direct Oral Anticoagulants: State-of-the-Art.* Semin Thromb Hemost, 2019. **45**(5): p. 490-501.
9. Sivolella, S., et al., *Managing dentoalveolar surgical procedures in patients taking new oral anticoagulants.* Odontology, 2015. **103**(3): p. 258-63.
10. Patel, N., et al., *Dual anti-platelet therapy and dento-alveolar surgery. How do we manage patients on anti-platelet medication?* Br Dent J, 2014. **217**(11): p. E24.
11. Chinnaswami, R., et al., *Dentists' Knowledge, Attitude and Practice in Treating Patients Taking Oral Antithrombotic Medications - A Survey.* J Clin Diagn Res, 2017. **11**(1): p. Zc88-zc91.
12. Sharma, P., et al., *A comparative study between light transmission aggregometry and flow cytometric platelet aggregation test for the identification of platelet function defects in patients with bleeding.* Blood Res, 2021. **56**(2): p. 109-118.
13. Steg, P.G., et al., *ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation.* Eur Heart J, 2012. **33**(20): p. 2569-619.
14. Breet, N.J., et al., *High on-treatment platelet reactivity to both aspirin and clopidogrel is associated with the highest risk of adverse events following percutaneous coronary intervention.* Heart, 2011. **97**(12): p. 983-90.