

Warfarin induced hematuria**Dhiren Patel¹, Kamlesh Patel^{1*}, Sapna Gupta², Supriya Malhotra¹, Pankaj Patel³**¹Department of Pharmacology,²Department of Emergency
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commercial use, distribution,
and reproduction in any
medium, provided the original
work is properly cited.**ABSTRACT**

Warfarin is an oral vitamin K antagonist prescribed to those patients for the treatment and prevention of thromboembolism. The major challenges to be faced during the therapy were a greater risk for both major as well as minor bleeding, which makes the regular monitoring of INR (international normalized ratio) mandatory. Herein, we reported a case of Warfarin induced hematuria which is serious and we concluded this causality as possible category according WHO-UMC causality category.

Keywords: Hematuria, Warfarin, Prothrombin time**INTRODUCTION**

Hematuria, defined as the presence of red blood cells in the urine. Visible hematuria, also known as gross hematuria is clearly visible change in urine color due to blood additives, may be a symptom of serious urinary tract disease. Thus, it should always be an urgent diagnostic matter for a clinician. The usage of anticoagulant or antiplatelet drugs is beneficial for patients with several diseases. However, serious complications may appear during such a therapy, including mucosal bleeding in the form of hematuria. Iatrogenic hematuria may be the reason for urological consultation and hospitalization in urological department,

during which standard diagnostic procedures are usually performed.¹ This case report points out the occurrence of the hematuria in the patient receiving Warfarin for long time.

CASE REPORT

An 80 year old male presented to emergency medicine department with c/o blood in urine since 1 day, he went to private hospital and inj. Trenexamic acid and Botropase was given along with catheterization. For further management he came to our hospital. Patient was known case of cerebro-vascular stroke, ischemic heart disease and hypertension since 15 years.

For that he was on tab digoxin (0.25 mg) 0-0-1 (Saturday and Sunday off), tab. warfarin (4 mg) 0-0-1, tab telmesartan + metoprolol (40 mg/50 mg) 1-0-1, tab aspirin + atorvastatin (75 mg/10 mg) 0-0-1 since 3 years. Physician diagnosed him as Warfarin induced hematuria after ruling out other causes of bleeding. Patient's vitals were as follow:

Temp: normal, pulse: 80/min, BP: 210/110 mm of Hg, CVS: S1-S2 normal, CNS: conscious, follows verbal commands. RS: bilateral air entry heard.

Tab. warfarin and tab aspirin + atorvastatin were stopped. 4 units of fresh frozen plasma and vitamin K injection were started on the day of admission. 3 ampoules stat and

1 ampoule of vitamin K injection were given for next 3 days. Inj. labetalol 5 ampoules (5 mg/ml) in 50 cc saline at the rate of 2 ml/hour was started for the hypertension. Other conservative management was also given along with.

On next day, USG KUB shows prostate enlargement with parenchymal calcification. For that cap, Dutasteride 0.5 mg (0-0-1) was started and for hypertension tab Losartan 50 mg (1-0-1) and tab Clonidine 0.1 mg (1/2-1/2-1/2) was started. Macroscopic hematuria subsided on next day and patient was better.

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Table 1: Prothrombin time, INR and APTT of patient on admission and discharge.

Day of report	Prothrombin time (12-16) (in seconds)	INR (0.8-1.2)	APTT (control) (in seconds)
On admission	40.8	3.94	36.5 (30.0)
Next day of admission	19.1	1.54	-
On discharge	17.6	1.39	30.7 (30.0)

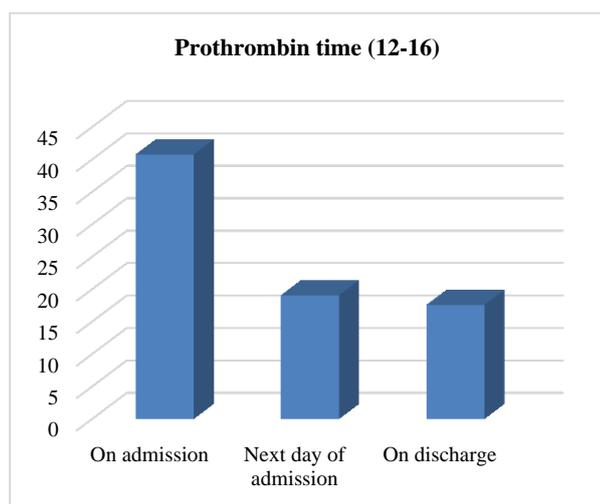


Figure 1: Suggestive of patient prothrombin time (in seconds) on admission and discharge.

DISCUSSION

Anticoagulants are increasingly used for the prevention and treatment of thromboembolic complications of vascular diseases.² Bleeding from the urinary tracts is naturally one of the most important complications of such a therapy. Hematuria occurred to be the main reason for consultations.³ Being the matter of urological visits in various departments, hematuria is claimed to involve one among all urological visits. Though findings differ slightly in our study, but our patient made up a specific group of anticoagulants uptake due to serious health conditions (cardiac abnormality, vascular abnormality). About one-third of patients who had bleeding complications, had more than one indication for

anticoagulants, for example, peripheral and/or cerebral arterial disease, ischemic heart disease, atrial fibrillation, and venous thromboembolic disease.⁴

Drug interactions of Warfarin that enhance the risk of hemorrhage in patients include decreased metabolism due to CYP2C9 inhibition by aspirin.⁴ In our case, aspirin low dose (75 mg) plays key role for mucosal bleeding in the form of hematuria. According to studies, Warfarin and aspirin has highly predictable interaction which causes platelet inhibition.⁵ The risk of bleeding is increased two-to three fold when aspirin is given in conjunction with warfarin.⁶ One study suggested, that there is 25% cases of genito-urinary bleeding among warfarin induced bleeding and there is increase in the risk of fatal/hospitalized bleeding with age.⁷

CONCLUSION

This case shows common incidence of warfarin induced bleeding in the form of hematuria. The incidence of bleeding could be prevented by choosing proper prescription knowing drug-drug interactions and by taking patient's drug history.

One should realize that especially, in comorbidity the anticoagulant therapy needs to be administered not only carefully but also individually. And routine prothrombin time and INR should be evaluated and dose of warfarin should adjusted accordingly. Also, one should have proper knowledge of drug interaction before prescribing multiple drugs.

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