

A Case Report of Warfarin Induced Upper Gastrointestinal Bleeding

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Abstract: Warfarin is an oral vitamin K antagonist prescribed to those patients for the treatment and prevention of venous 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.

Keywords: Warfarin, INR, Atrial fibrillation, Gastro Intestinal (GI) bleeding

1. Introduction

Warfarin is a coumarin derivative widely prescribed vitamin K antagonist as an oral anticoagulant which is discovered serendipitously in early 1980s. It is approved by FDA (food and drug administration) for various therapeutic indications and thereby considered to be a cornerstone in the prevention and treatment of venous thromboembolism, as well as for the prevention of thromboembolic complications associated with atrial fibrillation (AF), heart valve replacement and myocardial infarction. Patients treated with oral anticoagulants predispose to certain risk factors that contribute significant bleeding includes elderly population with an age greater than 75yrs, presence of comorbidities such as systemic hypertension, old stroke, paroxysmal atrial fibrillation etc. Warfarin associated bleeding mainly presents in gastro intestinal tract, urinary tract, soft tissues and oropharynx whereas GI bleeds is considered to be more fatal (Pautas et al., 2006). However the use of warfarin in elderly population shows a good safety profile when the dose is adjusted and INR is monitored accordingly. For an elderly population, in order to prevent the bleeding complications the INR with 2.5 is considered to be a gold standard and the commonly suggested therapeutic range is 2.0 – 3.0 (Prashanth et al., 2012). As the elderly patients are more towards the bleeding risk the factors that increase INR and thereby bleeding includes drug-drug interactions, drug-food interactions and accidental overdosing.

2. Case Report

Patient was a conscious oriented 80 year old male who was brought to casualty with the complaints of vomiting fresh blood in large quantities. He was tired and had light-headedness. He consumed warfarin three times in a day for past 2 weeks. Patient was on anticoagulation therapy for paroxysmal atrial fibrillation.

Investigations:

On examination the patient had bradycardia (HR:40bts/min) and hypotension(90/60mmHg), also the blood investigation revealed anemia (Hb:6.1g/dl). He was immediately transferred to medical ICU(intensive care unit) and transfused with packed RBC (red blood cell) and fresh frozen plasma to replenish the body reserves and to counteract the warfarin and aspirin, amiodarone. PT/INR was reported undetectable at the time of admission so

warfarin was withheld from the past medications. Electro Cardiogram- Sinus bradycardia with features of type 1 second degree heart block Computed Tomography Brain- showed no intracranial bleed Upper GI endoscopy- showed polypoidal lesion with stigmata of recent bleed in the antrum part of the stomach. Ultrasound of abdomen- showed mild fatty liver, right simple renal cortical cyst.

Management:

There shows a clear evidence of warfarin on its good positive response, but the outcomes can only be finalised by

- T. Warfarin 2mg 0-0-1 at 6pm for 4 days (dose to be adjusted on review)
- T. Pantoprazole 40mg 1-0-0 for 1 month
- T. Arkamine (Clonidine) 100mcg 1-1-1 to continue
- T. RemyelinD(nutritional supplement) 0-1-0 to continue
- T. Syndopa 110mg (Carbidopa (10mg) + Levodopa (100mg)) 1-0-1
- T. Shel D (Calcium Supplement) 500mg 1-0-0

Patient had to review in Cardiology after 1 week with the holter monitoring reports and also in the Geriatric medicine with CBC (complete blood count), PT/INR reports. Patient was advised to follow a diabetic diet and also warned to seek immediate care when any bleeding manifestations like vomiting blood, gum bleeds, excess tiredness, headache, blurring vision, palpitations, breathlessness or chest discomfort.

3. Discussion

The coumarin derivative warfarin an anticoagulant works by preventing platelets from sticking from each other to form blood clots. It can cause serious bleeding so proper monitoring is required which is by INR monitoring. The warfarin toxicity or overdose results from administering high dose, altered protein binding, low potassium intake, reduced synthesis or increased clearance of vit K dependent clotting factors and more important the use of Erythromycin, Fluconazole, Amiodarone, Propranolol, Proxicam and Omeprazole which compete for the protein binding sites with the warfarin. As the warfarin has narrow therapeutic index, they result in major or life threatening bleeding and most of the bleeding are from gastrointestinal, urinary, soft tissues (6.5%), intracranial hemorrhage (1%). The target

INR of warfarin patients is 2-3 bleeding is hiked even at low anticoagulation of INR 5.

4. Conclusion

The accidental overdose of warfarin due to poor adherence in a well cognitive oriented elderly patient with atrial fibrillation. Hence the patient presented with spontaneous upper gastric bleeding which has led to initial ICU stay followed by episodes of bradycardia and hypotension. Due to this patient required additional monitoring and prolonged hospital stay.

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