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WARFARIN INDUCED HEMOPTYSIS – A CASE REPORT

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ABSTRACT

DAH (Diffuse alveolar haemorrhage) is the result of the accumulation of intra-alveolar red blood cells originating from the alveolar capillaries. Hemoptysis is a spitting or coughing up of blood, caused by bleeding of the lungs or from the tracheobronchial tree. Previosly reports cite the occurrence of pulmonary hemorrhage in patients treated with coumadin, warfarin, or heparin. Diffuse alveolar hemorrhage complicating warfarin therapy is associated with a high mortality rate. Vigilance should always be maintained to monitor INR's when anti-cougulants are administered so as to prevent bleeding complications as seen in this case.

KEYWORDS: Warfarin, Hemoptysis, Diffuse alveolar haemorrhage, INR & PT.

INTRODUCTION

Hemoptysis is defined as the spitting or coughing up of blood, caused by bleeding of the lungs or from the tracheobronchial tree. It may be a symptom of several diseases, more or less severe, but its appearance induces concern to the patient and requires a full diagnostic investigation.[1]

It often presents with a clinical triad of hemoptysis, anemia and diffuse alveolar consolidation. It is caused by diseases that damage the alveolar capillary barrier or by disorders of coagulation. Only a small number of reports cite the occurrence of pulmonary hemorrhage in patients treated with coumadin, warfarin, or heparin. Diffuse alveolar hemorrhage complicating warfarin therapy is associated with a high mortality rate.[2]

Bronchial artery embolization has also an important role in recurrent chronic hemoptysis, for recurrence prevention. However, it has not yet been considered a definitive therapeutic

measure, because of its recurrence rate which is higher than 25%. Detailed physical exam, diagnostic tests are an important part of the diagnostic evaluation, such as chest X-Ray, chest CT scan and bronchoscopy.[1]

CASE PRESENTATION

42 yr old female was a known case of Deep vein thrombosis, presented with chief complaints of hemoptysios since 2 days and admitted in General Medicine department.

Physical Examination

On examination, Patient was found to be conscious & coherent. Pulse Rate 90/min, Heart with regular rhythm, lungs clear and abdominal examination revealed no abnormalities. Blood pressure: was found to be low (100/70mm of Hg).

Past History

On her Past medical history she was known case of deep vein thrombosis (left iliac vein extending up to left femoral vein) since 5 months. Past medication history revealed use of Tab.Warfarin 5mg/PO/OD since 5 months and Tab. clopitab A 75mg/OD stopped 2 months back.

Social history revealed that she is a mild toddy consumer and have any no abusive habits of paan masala and tobacco or gutkha chewing.

Laboratory Investigations

General Random Blood Sugar: 110gm/dl, Blood Urea Nitrogen: 28mg%. Complete blood picture (CBP) revealed low, Haemoglobin: 7gms%, RBC: 3.8Cells/cu mm, Sodium: 153mEq/L, Potassium: 4.1mEq/L, Chloride: 109mEq/L, Prothrombin time: 45.9 Sec, INR: 5.36 Sec, Bronchoscopy and chest X- ray revealed Diffuse alveolar haemorrhage.

Treatment

Initially symptomatic treatment has been started; Suspected drug Tab.Warfarin has been stopped because which has been lead to this condition. On day of admission fresh frozen plasma transfusion was done, along with Inj.Ceftriaxone 1gm/IV/BD, Tab.Pantoprazole 40mg/OD, Tab. B Complex OD, Inj.Vitamin K 10mg/IV/OD, Inj. Tranexemic acid 500mg/IV/OD and Syp.Benadryl 2 tsp/BD for 5 days.

Finally patient was discharged with the Tab.Pantoprazole 40mg/OD, Tab.Multivitamin/OD.

DISCUSSION

DAH (Diffuse alveolar haemorrhage) is the result of the accumulation of intra-alveolar red blood cells originating from the alveolar capillaries.[3] Since the first case of DAH caused by warfarin intoxication reported by Brown et al.[4] In 1965, few other reports have been described in the literature. Warfarin-induced DAH is usually severe and can be lethal.[5] However, the rate of alveolar hemorrhage in patients taking anticoagulant therapy is low and forms a minor part of bleeding complications. Furthermore, the new anticoagulants, such as abciximab and epifibatide, are more potent, and DAH induced by these drugs has recently been reported.[5,6]

Our patient had abruptly increased INR and PT. Although we investigated other concomitant drugs, trauma, or infections, we could find the etiology of the suddenly prolonged anticoagulation.[7] We did not examine the genetic polymorphisms of cytochrome P-450 enzyme 2C9 (CYP2C9) and vitamin K epoxide reductase complex 1 (VKORC1), which can affect the management of warfarin therapy. CYP2C9 is a key enzyme in the hepatic metabolism of warfarin.[5] Firstly, it is very important to confirm the condition in clinically suspected patients with hemorrhage, because it can be lethal due to anemia and other respiratory problems.[7]

Warfarin was withdrawn from therapy, and 10mg vita-min K and fresh frozen plasmas were administered intravenously. The patient had good prognosis over subsequent 3-4 days and was discharged home in stable condition.

DAH can be associated with or without systemic findings. Certain conditions that are associated with systemic findings include Henonch Scholein purpura. Exposure to toxic agents such as insecticides and pesticides, connective tissue diseases, and use of offending drugs such as anticoagulants, D-pencillamine, nitrofurantoin, amiodarone, propylthiouracil, or cocaine.[8]

There have been prior cases reported about catastrophic alveolar hemorrhage due to supratherapeutic INR’s (prothrombin time of 45.9 seconds) , but in this case we find that a mild to moderate supratherapeutic INR can also cause diffuse alveolar hemorrhage.[9]

CONCLUSION

If a patient with warfarinization shows over-anticoagulation, prompt diagnosis and aggressive treatment for haemorrhage should be performed. INR and PT test's should be performed at least 2 times in a month to prevent bleeding complications. According to these tests dose should be adjusted.

Vigilance should always be maintained to monitor INR's when anti-cougulants are administered so as to prevent bleeding complications as seen in this case.

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