Case Report
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Warfarin-induced Sublingual Swelling: A Case of Pseudo-Ludwig Angina

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Abstract

Pseudo-Ludwig angina is a swelling that develops generally due to a cause other than an infection and can lead to fatal conditions such as severe respiratory obstruction. Due to anticoagulant use is rarely reported in the literature. This study presented a patient whose INR value was within the normal range and who developed sublingual swelling after dental treatment (intraoral trauma). A 68-year-old female patient was admitted to the emergency department complaining of increasing intraoral swelling on examination with a sublingual 3x5 cm hematoma. Warfarin was stopped, and she was monitored for possible intubation risk in the service. The patient did not develop respiratory distress and was discharged 4 days later. The INR range within which intraoral interventions can be performed safely is still unclear. The dentist should keep in mind that such complications may develop and be prepared for bleeding complications before treatment using warfarin patients.

Keywords: Warfarin, Pseudo-Ludwig Angina, Bleeding

Introduction

Ludwig's angina is submandibular cellulitis that occurs after an oral infection such as gingivitis. Pseudo-Ludwig angina is a swelling that develops generally due to a cause other than an infection, and can lead to fatal conditions such as severe respiratory obstruction. Pseudo-Ludwig's angina due to anticoagulant use is rarely reported in the literature.

The target International Normalized Ratio (INR) level for patients receiving warfarin therapy varies depending on the underlying condition but is typically recommended to be between 2.0 and 3.5. Case reports of high doses of anticoagulants in the context of the etiology of pseudo-Ludwig angina have been presented in the literature.1-3 This manuscript presented a patient whose INR value was within the normal range and developed sublingual swelling after dental treatment (intraoral trauma).

Case Report

A 68-year-old female patient was admitted to the emergency department complaining of increasing intraoral swelling. On examination, the general condition was good, with a sublingual 3x5 cm hematoma and an approximately 5x2 cm ecchymosis from the front of the mandible to the neck (Figure 1). There was no dyspnea or stridor. There was mild submental oedema. No palpable mass was detected on neck examination, and there was no lymphadenopathy. Blood pressure was measured as 130/80 mmHg, pulse 82/minute, saturation 99, and respiratory rate 12-15/minute. The patient stated that she had applied for a dental procedure three days ago. She had no history of smoking. She used warfarin for 30 years due to mitral and aortic valve replacement and atrial fibrillation (AF). She had a history of heart failure and chronic anemia.

Figure 1: Sublingual hematoma

In the examinations taken in the emergency room, hemoglobin was 13.3 g/dl, hematocrit was 40%, leukocyte was 6.65 10*9/lt, INR ratio was 2.54, prothrombin time was 33, and the ECG showed atrial fibrillation.

Neck tomography was requested, and the images showed a hyperdense lesion with a diameter of 3x1.5 cm, compatible with a hematoma, at the level of the genioglossus muscle at the floor of the mouth (Figure 2).

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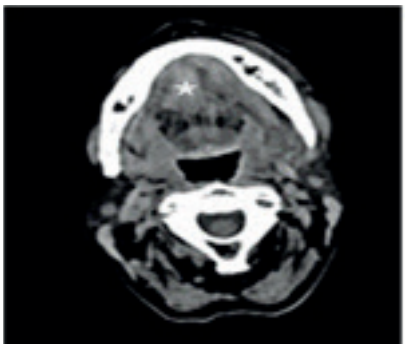

Figure 2: Axial non-contrast computed tomography scan shows hyperdense lesion compatible with hematoma at the level of the genioglossus muscle.

The cardiologist and otolaryngologist evaluated the patient. Warfarin was stopped, and she was monitored in the service for respiratory tract monitoring and possible intubation risk. Low molecular weight Heparin, antibiotics, diuretics, and beta blockers were administered. At discharge, the hematoma had regressed entirely. The patient did not develop respiratory distress and was discharged 4 days later. The patient was followed up at the cardiology outpatient clinic at one-week intervals, and it was determined that the INR level reached the target level after 5 weeks (2.32 ratio).

Discussion

Pseudo-Ludwig cases developing after high INR levels following intentional or unintentional intake of oral anticoagulants have been reported in the literature.2, 3 Still, cases with normal INR, as in this study, are rare.

A study by Visser et al4. stated that in patients with heart disease and long-term use of warfarin, metabolism will deteriorate, possibly affecting the hepatic veins, and the INR level and bleeding risk will increase. This may explain why bleeding even though our patient's INR value was normal.

The most feared situation when developing pseudo-Ludwig's angina is the mechanical obstruction of the airway. Intubation may be difficult, and interventions such as tracheostomy and emergency cricothyroidotomy may be needed. In addition to treating the obstruction, the clinician must also consider the risk of aspiration. Appropriate medications can be added to the treatment against the risk of oedema and allergies that may develop after an intraoral procedure. In case of bleeding, intravenous (IV) vitamin K, fresh frozen plasma (FFP), and prothrombin complex concentrates (PCC) treatment should be given.5 Our case did not require intubation. Although there was a history of chronic anemia, profound anemia did not develop, and a rapid response was obtained to the conservative treatment.

Conclusion

The most common and feared side effect of Warfarin is bleeding, which may develop with a minor trauma (it can even be seen while brushing your teeth) or spontaneously. Bleeding is seen in various organs, but sublingual hematoma is rare and may cause obstruction in the airway. Many guidelines state that if INR is <3.5, simple intraoral interventions can be performed without discontinuing warfarin.6 Although, in our case the level of INR was in the lower limit the recommended range of 2.5 to 3.5, bleeding was developed. Based on this experience, individualisation of the INR limit may be considered, especially in elderly patients, to perform a safe intraoral intervention.

Patient consent was obtained for this study.

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