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Spontaneous Tonsillar Hematoma Due to a Vitamin K Antagonist: A Case Report

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Abstract **Case Report**

Vitamin K antagonists (VKAs) are oral anticoagulants, widely used for the prevention of thromboembolic diseases, but their use carries certain risks. The main complication of these anticoagulants is bleeding, requiring a careful balance of benefit versus risk and strict monitoring of the international normalized ratio (INR). Bleeding is most commonly seen in the gastrointestinal, genitourinary, and cerebral systems. Localization in the upper aerodigestive tract is very rare, with cases of retropharyngeal, laryngeal, and/or sublingual involvement reported in the literature. We describe here an exceptionally rare case of bilateral tonsils hemorrhage related to VKAs in a 58-year-old woman undergoing treatment with acenocoumarol (Sintrom) for atrial fibrillation

Keywords: Vitamin K antagonists, Oral anticoagulants, Bleeding, Tonsils hemorrhage, Acenocoumarol, INR.

INTRODUCTION

Vitamin K antagonists are oral anticoagulants used to prevent thromboembolic diseases [1-2]. However, their use is not without risk. The primary complication associated with these drugs is bleeding, necessitating strict monitoring of the INR to maintain an appropriate benefit-risk balance. Bleeding is frequently observed in the gastrointestinal, genitourinary, and cerebral systems. Involvement of the upper aerodigestive tract is extremely rare, with reports in the literature of retropharyngeal, laryngeal [3-4], and/or sublingual hemorrhages [3-5]. Here, we present an extremely rare case of hemorrhage associated with VKAs affecting the two tonsils in a 58-year-old woman treated with acenocoumarol (Sintrom) for atrial fibrillation.

CASE REPORT

A 58-year-old woman with a history of right breast cancer treated with mastectomy followed by radiochemotherapy, and atrial fibrillation managed with acenocoumarol (2 mg/day) presented to the emergency department at Mohamed V Military Hospital on October 23, 2018, with the sudden onset of spontaneous profuse bleeding from the mouth. There was no history of recent trauma, coughing, vomiting, epistaxis, or other externalized bleeding (melena or rectal bleeding). The evolution was characterized by a progressive worsening of dyspnea, dysphagia, and difficulty speaking.

On admission, she was anxious, agitated, tachycardic at 130 beats per minute, and tachypneic at 35 breaths per minute. Oxygen saturation was 96% on room air, and blood pressure was 160/80 mmHg. Clinical examination revealed spontaneous, continuous bleeding from the oropharynx, with two collections in both tonsillar lodges obstructing the oropharyngeal airway and displacing the tonsils, rendering them non-visible (Figure 1). Blood tests showed: hemoglobin level of 9.2 g/dL, INR of 4, prothrombin time of 36%, activated partial thromboplastin time (APTT) of 22 seconds, and platelet count of 300,000/mm3. VKA treatment was immediately discontinued, and the patient received two units of red blood cells and 10 mg of vitamin K.

Cervical tomography (CT) revealed deep parapharyngeal hematomas (tonsillar beds) measuring 22×22 mm on the right and 33×24 mm on the left, causing near-complete stenosis of the oropharyngeal lumen (Figures 2 and 3). Anticoagulation was managed with a transition to low-molecular-weight heparin. A tracheotomy was considered to secure and protect the airway, but the patient declined the procedure. Symptoms improved, and the hematomas gradually regressed over eight hours (Figure 4). Follow-up INR was 1,7.

Figure 1: Photo showing the hematoma of the 2 tonsillar lodges completely obstructing the oropharynx

Figure 2: Axial cervical CT scan showing the hematoma of the two para-tonsillar spaces

Figure 3: Cervical CT scan in sagittal section showing the paratonsillar hematoma

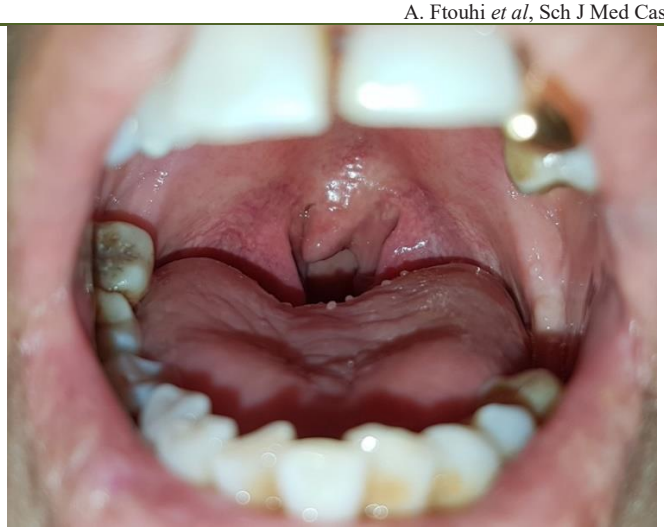

Figure 4: Photo showing the resorption of the hematoma with the posterior wall of the oropharynx becoming visible

DISCUSSION

Anticoagulation therapy with VKAs (Warfarin/ Acenocoumarol/Phenprocoumon) is commonly used for the prevention of thromboembolic diseases in patients with atrial fibrillation and those undergoing certain cardiac surgeries. However, these drugs can cause significant adverse effects, such as bleeding or hematomas in various anatomical sites [6]. Their use requires rigorous and regular INR monitoring.

Several factors can potentiate the effects of VKAs, including overdosing due to prescription errors or missed INR checks, drug interactions (antiplatelet agents, antibiotics…), and advanced age, which increases the risk of major bleeding due to comorbidities like renal or hepatic insufficiency and increased endothelial vascular fragility [7-8]. Minor trauma, coughing, or physical exertion can trigger bleeding by causing capillary tears [9-11]. In this case, our patient had missed her follow-up appointments and had not monitored her INR for nine months, leading to excessive anticoagulation (INR = 4).

Tonsillar bed hematomas may present with various clinical manifestations depending on their size, ranging from asymptomatic small hematomas to large compressive hematomas threatening life due to airway obstruction or hemorrhagic shock [12]. No cases of tonsillar hematomas secondary to VKAs have been reported previously. The typical clinical presentation may include a parapharyngeal space collection causing variable bleeding, rapidly worsening respiratory distress, and swallowing difficulties.

Ultrasound and CT imaging are recommended for diagnosing cervical hematomas [9]. Angio-CT plays a crucial role in managing lateropharyngeal and retropharyngeal hematomas by detecting active bleeding and identifying the responsible vessels [7-9].

Pharyngeal hematomas are typically treated conservatively, with recovery achieved within a few days. The therapeutic approach [5] includes:

- Securing the airway.
- Controlling bleeding with blood transfusions if needed.
- Immediate discontinuation of anticoagulation.
- Administration of vitamin K, fresh frozen plasma (FFP), and prothrombin complex concentrate (PCC) to reverse the effects of VKAs.

When the patient's respiratory or hemodynamic status upon admission does not allow for conservative management, or if conservative measures fail, more invasive interventions such as endotracheal intubation, cricothyroidotomy, or tracheotomy may be necessary. Hemostatic tonsillectomy is not recommended and should be reserved for rare cases of persistent bleeding after normalization of coagulation parameters.

CONCLUSION

Spontaneous hematoma of the tonsillar lodges is an exceptional complication of VKA overdose. It is an emergency that requires rapid diagnosis and appropriate management. Vitamin K is the ideal and often effective treatment alone, but a tracheostomy is not exceptional. Patient education and awareness of VKA management are essential for prevention.

Conflict of Interest: The authors declare no conflicts of interest.

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