Case Report

Sublingual Hematoma Linked to Uncontrolled Warfarin Use: A Case Report

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ABSTRACT
Anticoagulant treatment is a vital treatment method used in prophylaxis and treatment of thromboembolic diseases. In anticoagulant treatment, the most significant complication that can sometimes threaten patient’s life is hemorrhage. Therefore, planning anticoagulant treatment in a way not to cause thrombosis or bleeding and meticulous clinical and laboratory follow-up is vital. Hemorrhage in sublingual area is very rare. However, warfarin related bleeding in this area is life threatening and it might require securing patient's airway. In its treatment, it is recommended that anticoagulation with vitamin K, pro-thrombin complex concentrate (PCC) and fresh frozen plasma (FFP) be reversed immediately. In this article, a case who developed sublingual hemorrhage caused by prophylactic warfarin intake due to Coronary Artery Bypass Graft (CABG) has been presented.

Key words: Warfarin, Overdose, Sublingual haemorrhage

ÖZET
Kontrolsüz Warfarin Kullanımlına Bağlı Gelişen Sublingual Kanama: Olgu Sunumu

Warfarin is an oral anticoagulant which is widely used to prevent arterial and venous thromboembolic incidences. It takes its anticoagulant effect by decreasing vitamin K amount needed for the activation of coagulation factors II, VII, IX and X. Anticoagulant respond is very variable and is influenced by the genetic polymorphism of the enzyme required for medicine metabolism, vitamin K intake with diet, various medicines, food and herbal treatment. The most important side effect of warfarin use is bleeding. Bleeding is more frequently seen in intra-cerebral, skin, gastrointestinal system, genitourinary system, adrenal glands, epidural space, peritoneal cavity and subconjuntival area. Laryngeal or retropharyngeal hemorrhage secondary to the use of oral anticoagulants can cause upper airway obstruction. Sublingual hemorrhage are extremely rare (1, 2). Ideal oral anticoagulation can be achieved by laboratory monitoring individually. While paracetamol, amiodarone, erythromycin, flucon-azol, fluoxetine, metronidazole, salicylate, sulfamethoxazole, tamoxifen and triode hormone increase warfarin’s anticoagulant effect, antitroide medicines, barbiturates and carbamazepine decreases its effect (3, 4). If it is not diagnosed and treated early, it shows fast progression and threatens life. In this article, a case who developed sublingual hemorrhage caused by oral warfarin use as an anticoagulant treatment and recovered with conservative treatment has been presented.

CASE REPORT
A 72-year-old female patient applied to emergency service with sore throat, expectoration, sublingual panaclua and cyanosis complaints that had been going on for the previous 48 hours. In the physical examination of the patient, blood pressure was 140/86
mm/Hg, pulse was 96/min rhythmic, respiration was 23/min, and temperature was 36.8°C. At the bottom of the patient’s mouth was a reddish panicula reported that had been spreading rapidly for the last one day. The voice of the patient thickened after the panicula was seen but there was no defined respiratory difficulty. The examination of the patient’s oral cavity revealed that there was soft, red and submucosal located swelling which involved the bottom of the mouth and bilateral ventral surface of the tongue (Figure 1-3). There was no finding of airway failure in the flexible endoscopic examination of pharynx and larynx and laryngeal mobility was natural. The story of the patient revealed that CABG had been applied two years ago and Warfarin (Coumadin®) 5mg/day was started as an oral anticoagulant treatment. In the electro-cardiograph (ECG) there was normal sinus rhythm. In the laboratory examination at submission, it was determined that hemoglobin was 13.0 gr/dl, thrombocyte value was 292000/mm³, International Normalized Ratio (INR) level was 12. Besides clinical findings, the patient, who was diagnosed with clinical findings that she had sublingual hemorrhage caused by excessive dose of warfarin, was given 2 units of FFP. INR level after the treatment was established as 5.74. Twelve hours later, INR value was measured as 1.90. The patient who was observed to have recovered clinically was discharged on the 4th day.

**DISCUSSION**

Anticoagulant agents are mostly used in acute ischemic strokes, deep venous thrombosis, pulmonary emboli, heart valve diseases, acute myocardium infarction and atrial fibrillation. The oral anticoagulant agents currently used are warfarin, acenocoumarol and fenindione. The effect mechanism of warfarin is to block gamma-carboxylation of various glutamate residues of vitamin K dependent coagulation factors (factor 2, 7, 9, 10) in prothrombin, C and S proteins in combination with the expoid reductase activity of vitamin K found in microcosms of the liver (3). Bleeding is the most important complication in patients who receive anticoagulant treatment and has a prevalence rate of 2 to 10%.

Bleeding is seen in intracranial area, skin, gastrointestinal system, genitourinary system, adrenal glands, epidural space, soft tissues, nose, pharynx, peritoneal cavity, subconjunctival area, thorax, intraocular, retroperitoneum and joints (1, 4). During warfarin (Coumadin®) application major bleeding risk within one year ranges between 0.5 to 7.0 % and this risk is directly proportional to anticoagulation level.
Particularly, in the case of life-threatening bleedings, the decision whether to stop or continue the treatment is vital. It should be taken into consideration that if treatment continues patient may bleed again and if it is stopped, there is a risk of thromboemboli. Thromboemboli is very low compared to re-bleeding risk. It is stated that vitamin K or factor replacement is only induced in patients with major bleeding caused by warfarin. It is known that hemorrhage risk increase in patients who use anticoagulant and who have INR level 6 or more (5). Kucher et al. (6) have reported that incidence of bleeding caused by warfarin use has increased considerably recently. It has been reported most of the patients who develop bleeding use other non-steroid anti-inflammatory, anti-agregante medicines together with warfarin.

In the story of our patient, it was observed that she used other non-steroid anti-inflammatory, anti-agregante medicines together with warfarin. Our patient also had mandibular totally removable denture which can lead to traumatic damage in the sublingual area. While upper airway obstruction generally developed as a result of sublingual, retropharyngeal or epiglottic bleeding in the patient who received anticoagulant treatment, it can be difficult to diagnose bleedings in submaxillary or retro-pharyngeal areas. Symptoms related to sublingual bleeding are frequently seen in cervical mass, sublingual or retro-pharyngeal panicula and tachypnea and stridor, respectively. Bleedings or hematomas in the sublingual area can be diagnosed with inspection. While bleeding are seen locally only in sublingual area at the beginning, upper airway entrance can be invisible as hematoma spreads to submaxillary area. Therefore, patients to be followed medically should be in intensive care units or in places where they can be monitored closely. Urgent airway control unit which includes tracheostomy application should be ready on the bedside (7, 8). In our case, there were sore throat, hemoptysis, sublingual panicula and cyanosis complaints. However, no airway obstruction was determined in the inspection. Every patient who comes with sore throat complaint and who has received anticoagulant treatment should be taken seriously because this state is often observed just before acute airway obstructions (9). Surgical drainage of sublingual hematoma is defined but its effectiveness is controversial (10). Our patient underwent surgical intervention too. However, frequently spontaneous resolution was observed within a few days after coagulation returned to normal. The placement of an endotracheal tube due to the obstructive effects of endotracheal intubation of the sublingual hematoma causes the risk of bleeding (8).

In the patients who are considered to be applied endotracheal intubation or surgical airway intervention, invasive procedure should be performed after anticoagulation is immediately reversed preferably with PCC. In the treatment of our case, oral anticoagulant was discontinued and FFP was given. Besides, in the treatment of our case there was no a condition determined to require endotracheal intubation or surgical drainage of hematoma. It is stated that vitamin K or factor replacement is only induced in patients with major bleeding caused by warfarin. Discontinuation of warfarin is recommended in patients with high INR value but without bleeding. Discontinuation of warfarin and follow-up are recommended in patients with INR value lower than 5 and with bleeding (11).

**Conclusion**

As oral anticoagulant drugs have vital importance, patient and his/her relatives should be very well
informed about the side effects of the drug. Sublingual hematoma which is a rare complication should be considered as a differential diagnosis in the patients who receive warfarin treatment and apply with the complaints of cyanosis, panicula and bleeding in the tongue. However, as life-threatening conditions develop very fast in such cases, early diagnosis and application of appropriate medical treatment prevent the need for artificial airway.

REFERENCES


