Streptokinase and facial haematoma

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Summary
We report two cases of facial haematoma following streptokinase therapy. This is an important complication as it can have fatal consequences. Early recognition and close monitoring are essential as emergency intervention may be required.

Keywords: streptokinase, haematoma, myocardial infarction

Introduction

Streptokinase infusions are widely used following myocardial infarction to improve survival after coronary thrombosis. Antithrombolytic treatment is known to predispose to haematoma formation (see box).¹⁻⁷ Some of these cases have been associated with trauma,² others were spontaneous.⁷ The complications of haematoma include hypovolaemia² and compression of local structures.^{3,4,6}

Haematomas of the soft tissue of the face may track between the investing cervical fascia and the pretracheal fascia and compress the trachea. Blood deep to the parotid fascia can move into the parapharyngeal tissues causing obstruction and compression of the larynx.

We would like to report two cases of facial haematoma associated with thrombolysis using streptokinase. One case was associated with a mandibular fracture which preceded the myocardial infarction, and one was spontaneous.

Case reports

Case 1

A 71-year-old male developed central chest pain while walking. He collapsed and injured the right side of his face, he was otherwise unhurt. The chest pain lasted for over two hours, and he was taken to casualty. On admission he had electrocardiogram (ECG) changes suggestive of an inferolateral myocardial

infarction: ST elevation in leads II, III, aV₁, and V₆; reciprocal ST depression in leads V₁₋₃, and T wave inversion in leads V₄₋₆. He had superficial facial grazes which did not require suturing. He was tender over his right mandibular condyle, and closing his mouth was uncomfortable. X-Rays of his mandible taken prior to streptokinase treatment were reported as normal. He was given 1.5 megaunits of streptokinase in 50 ml of normal saline over one hour. One hour after completing the streptokinase infusion he developed an intra-oral swelling and bled from his chin laceration, gums, and mucosa of both cheeks. Examination revealed a haematoma on the floor of his mouth (figure 1). A heparin infusion was withheld. The bleeding settled after two hours, and the swelling reduced over the next four days. The airway was not compromised. An orthopantomogram of his mandible two days later confirmed a fracture of the right mandibular condyle which was treated conservatively.

Case 2

A 60-year-old man was admitted from home with a three-hour history of central chest pain that had started while he was in bed. An ECG showed ST elevation in leads V₄₋₆. His only medication was 150 mg of aspirin once a day. A diagnosis of myocardial infarction was made and he was treated with 1.5 megaunits of streptokinase in 50 ml of normal saline given over one hour. Ten minutes after completing the streptokinase infusion he developed a sensation of numbness over the right cheek. This was accompanied by a swelling extending from the anterior border of the parotid to the angle of the mouth, and from the zygomatic arch to the inferior border of the mandible (figure 2). There was no extension into the intra-oral or paralaryngeal soft tissues. The haematoma settled spontaneously over the next 24 hours.

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Haematoma formation associated with anti-thrombolytic therapy
<ul style="list-style-type: none">• abdomen• chest• brain and spinal cord• eye• soft tissues – limbs, face• joints

Figure 1 Photo of intra-oral haematoma

Figure 2 Photo of facial haematoma

Discussion

Use of streptokinase in patients with myocardial infarction is of proven benefit. It produces a hypocoagulable stage by defibrination and

activation of plasmin. We were unable to find any reference in the literature to facial haematoma associated with drug-induced anticoagulation or thrombolysis.

In facial haematomas the main potential risk is to the airway. In neither of the cases that we report was the airway sufficiently compromised to produce symptoms, and conservative management led to spontaneous resolution of the haematoma.

If the airway is compromised by a haematoma deep to intact skin and cervical fascia (ie, not within a surgical wound) then the airway would be best secured by endotracheal intubation. If intubation is difficult then cricothyroidotomy may be done in an emergency, unless facilities and personnel to do a tracheostomy are to hand. Drainage of the haematoma may be required.

We would wish to highlight this complication of streptokinase therapy. Facial trauma must be considered as a relative contraindication to the therapeutic use of streptokinase in a patient with a myocardial infarction. Neither of the patients reported here came to significant harm, the benefit of streptokinase is established and outweighs these problems. Therefore we recommend that, if a facial haematoma develops, the airway should be monitored closely, and further anticoagulation such as heparin withheld.

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