

Traumatic deep neck infection due to pulling a tooth with pliers

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Summary. Deep neck infection is life-threatening and mortal condition that requires immediate treatment. This infection is generally polymicrobial and frequently seen after upper respiratory infections, poor dental hygiene, trauma and surgery to the head and neck region. The symptoms of deep neck infections are swelling, dysphagia, pain, trismus, dysphonia and otalgia. Deep neck infections can be seen at any age and its mortality is about 20-50%. Initial management of the deep neck infection is intravenous antibiotic, protection of airway and drainage of abscess. Deep neck infections can cause severe complications even death can be seen, so physicians should be aware of these complications. Herein, we reported a 71-year-old-woman suffering from traumatic deep neck infection due to pulling a tooth with pliers. (www.actabiomedica.it)

Key words: deep neck infection, trauma, pliers

Deep neck infection is life-threatening and mortal condition that requires immediate treatment (1). This infection is generally polymicrobial and frequently seen after upper respiratory infections, poor dental hygiene, trauma and surgery to the head and neck region and in immunocompromised patients (1).

Odontogenic infections are common reason of the fascial infections (2) The purulent material of these infections may radiate to fascial gaps like sublingual, buccal, pterygomandibular and submandibular areas (2). The symptoms of deep neck infections are swelling, dysphagia, pain, trismus, dysphonia and otalgia (1). Herein, we reported a case of traumatic deep neck infection due to pulling a tooth with pliers.

A 71 year-old-woman admitted to emergency department suffering from pain, dysphagia, dysphonia and progressive swelling of the right part of the neck and face. The patient stated that she had pulled premolar tooth from right lower jaw with pliers. The patient's vital signs were as follows; blood pressure, 100/60 mmHg; body temperature, 38.7°C; heart rate, 115 beats/min. On physical examination, the patient

was oriented, alert and conscious. In the right part of the face and neck, there was periorbital diffuse edema, fluctuating mass and hyperemia. There was no previous medical history except hypertension. In laboratory examinations, white blood cell count was $15,6 \times 10^3 \mu/L$, C-reactive protein was 467 mg/L, there was no other abnormal test result. Computerized tomography of paranasal sinuses and neck region revealed subcutaneous gas and hemorrhage in the soft tissue of the right maxillary region and additionally there was gas and rise in soft tissue density in the right parapharyngeal space (Figure 1). The abscess drained by otorhinolaryngologist and antibiotic treatment including meropenem were given. The patient who under the treatment died in the third day due to uncontrollable hypotension.

Deep neck infections can be seen at any age and its mortality is about 20-50% (2). These infections usually originate from pharynx and oral cavity afterwards spread to submandibular, parapharyngeal and retropharyngeal spaces (2). Furthermore, these zones conjoin to critical areas such as skull base, meninges,

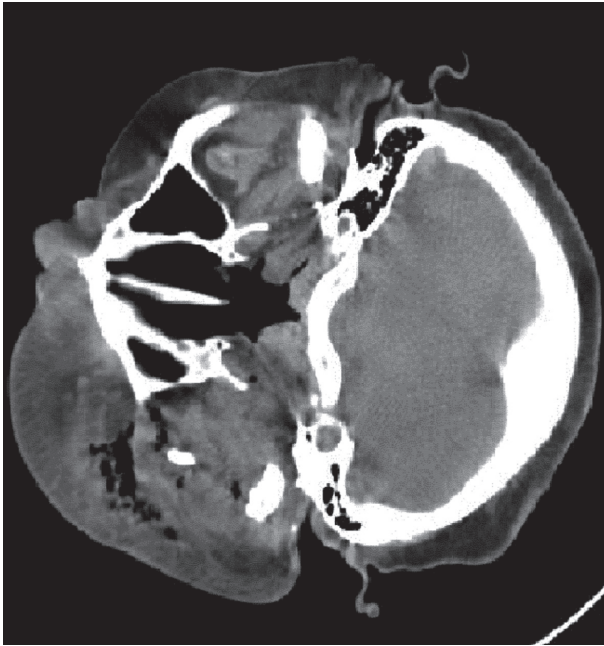


Figure 1.

mediastinum, neck and carotid sheath (2). Airway obstruction may result if infection radiates to near the pharynx and also hemorrhage and nerve injury may occur if infection spreads to the carotid sheath (3).

Initial management of the deep neck infection is intravenous antibiotic, protection of airway and drainage of abscess (1). Although the culture-guided antimicrobial treatment is suitable, empiric antibiotherapy has an important role in the progression of infection (4). In contrast with the geographical variations in microbiological specimen, several studies showed that the *Staphylococcus* (*S.*) species are main pathogens of deep neck infections (4). Even though proper treatment, severe complications with 35-50% mortality

rate may occur (3). Mediastinitis, necrotizing fasciitis, gangrenes and shock are serious complications of deep neck infections (3). Ultrasound, MRI, computerized tomography and soft tissue neck X-ray are diagnostic tests for evaluation of deep neck infections (3).

In conclusion, deep neck infections can cause severe complications even death can be seen, so physicians should be aware of these complications. Patients with deep neck infection have to be hospitalized and intravenous antibiotherapy and should be applied immediately.

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