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Penetrating injury of the soft palate – a case report

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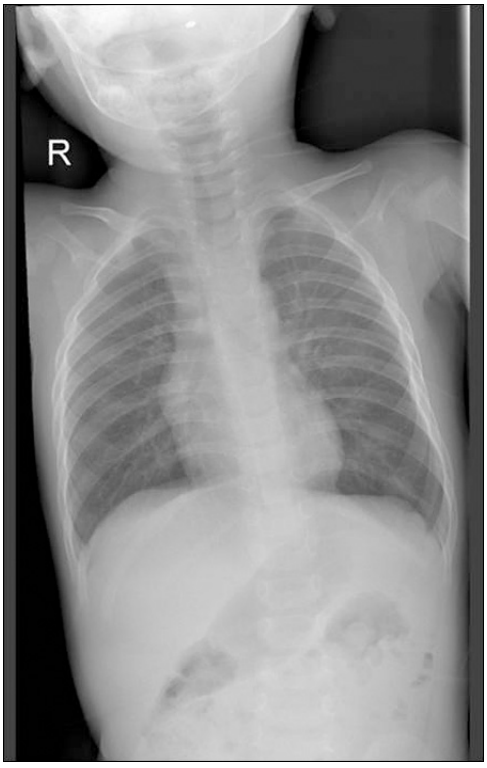
Introduction

Young children have, unfortunately, the proclivity for running with objects holding in their mouth and falling. Then it comes to penetrating injuries in the oral cavity, the soft palate, and the nasopharynx (1-9). Initial symptoms are rather bland, and often the small wounds heal uneventful without surgical intervention. As objects of injury toothbrushes, toys, chopsticks, musical instruments, and pens or pencils were described (8). In the primary therapy of these children also the question of any remaining foreign body in the wound comes up. The case report describes a patient with a penetrating injury of the soft palate, and an unusual foreign body.

Case report

An 11-month-old boy fell at home while crawling with a pen in his mouth. The first presentation was in the hospital at the home town, from where the child was transferred to our institution. On examination the child was awake, quiet, and had no dyspnoea, cough, or even neurological impairment. The approximately 1.5 cm long wound in the area of the soft palate on the left did not bleed. Since there was no suspicion of a foreign body, surgical repair was renounced, and follow-up consultation for the next day was arranged. At home, the mother detected, that the 1 cm long metal tip of the ballpoint pen lacked. In radiographs of the neck, chest and abdomen (Fig. 1) the foreign body in projection of the nose and pharynx was located. On clinical inspection under general anaesthesia together with colleagues from the ENT department the foreign body could not be seen, so a further radiograph was necessary (Fig. 2). After adenoidectomy the foreign body (Fig. 3) was found and removed endoscopic assisted from the atlanto-occipital area, and the wound in the soft palate (Fig. 4) was closed. Under antibiotic prophylaxis wound healing was without complications, and the child was discharged after 7 days.



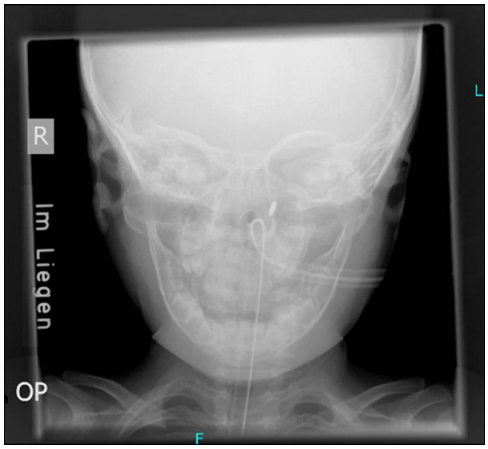


Fig. 1: X-ray of neck, chest and abdomen with the metallic foreign body in the nasopharynx (preoperatively)

Fig. 2: X-ray of head with the metallic foreign body in the nasopharynx (intraoperatively)

Discussion

Penetrating injuries in the oral cavity are common in children. The wounds heal remarkably well and surgical repair is undertaken for possible retained foreign bodies or large hanging mucosal flaps (2-4). Furthermore, antibiotic prophylaxis is recommended for injuries greater than 1-2 cm (4).
The laceration usually heals spontaneously, but the children can also develop life-threatening complications. Internal carotid artery thrombosis occurs due to vessel compression to the spine causing intimal disruption (4,7,8).
Particularly impalement injuries of the lateral soft palate/tonsil pillar can lead into this complication with subsequent cerebrovascular sequel like cerebral ischemia. In literature recommendations are made as followed: hospitalization for 48-72 hours in order to bridge the "lucid period", angiography in suspected thrombosis, surgical and anticoagulation therapy in positive radiographic findings (7).
Children without neurological symptoms can also be monitored at home by the parents, as usual in cases of mild head trauma (4). Parents should be accurately informed about the possible symptoms (nausea, vomiting, swelling, bleeding, seizures, and impaired consciousness) (5).

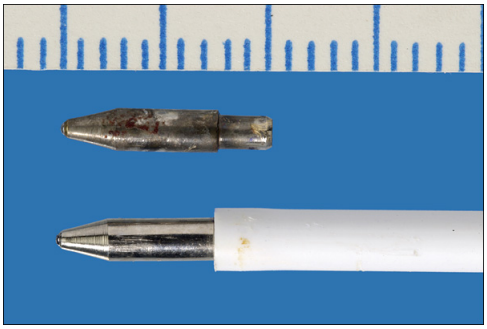


Fig. 3: Removed tip of the ballpoint pen (above) in comparison to a commercial one

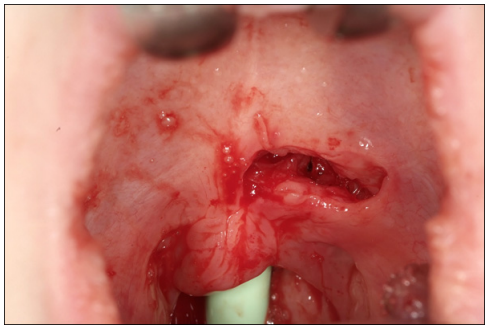


Fig. 4: Penetrating injury of the soft palate on the left prior to repair

Another life-threatening complication is an infection. The close proximity between the oral cavity and the parapharyngeal space may lead to spread of infection after an impalement injury (3). Anaerobic bacteria can come from the oral cavity with the penetrating object into the depth and lead to life-threatening deep neck infection. Clinically, an increasing neck swelling, trismus and drooling are visible. In evaluation courses of two patients a 24 hours period of observation in hospital, antibiotic prophylaxis, and discontinuing oral feed with awareness that surgical intervention is necessary are recommended (3).
Another case report describes a 12-year-old child, in which only 3 months after the fall with a pen between the teeth a foreign body in the pterygomandibular raphe was visible and could be removed. After the injury the intraoral wound healed without complications; the child complained only episodes of trismus (9).

Conclusion

In children with penetrating wounds of the soft palate it must to be alert also to an unexpected remaining foreign body in the posterior pharyngeal wall. In the case report it was initially not supposed, that the metal tip of a ballpoint pen remained in the wound. Therefore, we recommend looking at the object of injury in order to initiate further diagnostics (CT, MRI) to search for a foreign body.

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This Poster was submitted by Dr. Dr. Winnie Pradel.

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Poster Faksimile:

Penetrating injury of the soft palate – a case report

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*Department of Oto-Rhino-Laryngology

Universitätsklinikum Carl Gustav Carus DIE DRESDNER.

Introduction:

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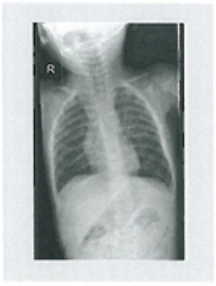
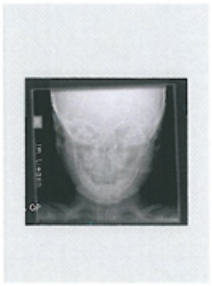


Abb. 1: X-ray of neck, chest and abdomen with the metallic foreign body in the nasopharynx (preoperatively)



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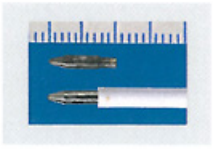

Abb. 3: Removed tip of the ballpoint pen (above) in comparison to a commercial one

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