A Case of Quinsy Following High-Pressure Water Jet Injury

Abstract:
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Abstract
High-pressure water injuries of the oropharynx are uncommon but can cause significant injury and airway compromise when they occur. A small number of cases of high-pressure water injury of the oropharynx have been reported in the literature, detailing a range of effects and outcomes. We describe the first reported case of high-pressure water injury of the oropharynx associated with peritonsillar abscess (quinsy) requiring surgical drainage.

Case Report
A previously well, twelve year-old boy with no history of tonsillitis presented to the Paediatric Emergency Department for review 5 days after injury to the oropharynx. The child reportedly discharged a high-pressure water hose (powerhose) through the mouth projecting to the right oropharynx while playing at home. Despite a small volume of bleeding and pain following the injury, medical review was not initially sought for the patient. The patient presented in a stable, apyrexial condition, feeling generally unwell with increasing odynophagia and nausea and referral was made to the Otolaryngology service. Examination revealed a fulminating right-sided peritonsillar abscess (quinsy), with evidence of preceding mucosal trauma notable. There was no evidence of neck abscess, surgical emphysema, bruising or other relevant examination findings. Nasendoscopy was completed which demonstrated a patent airway without any medialisation of the lateral pharynx. Laboratory results showed a raised C-Reactive Protein, 37mg/L. Incision and drainage was carried out emergently in the Emergency Department producing 10millilitres of frank pus. The patient received 3 days of IV antibiotic treatment prior to discharge on broad-spectrum oral antibiotic therapy. Culture results revealed heavy growth of Streptococcus Mitis/Oralis and Streptococcus Milleri sensitive to prescribed oral antibiotic therapy. The patient made a full recovery.

Discussion
High-pressure water jet injuries of a variety of body parts have been reported in the literature. Injury to the oropharynx appears to represent a very rare event, but has also been described in a small number of reports. Findings of significant internal trauma with minimal external injury are characteristic in high-pressure water jet injury. The effect of surgical emphysema, secondary to water and air being injected into tissue planes at high pressure, as well as the presence of significant vascular injury or microvascular thrombosis, has also been described. A significant risk of infection exists following high-pressure water jet injury and early antibiotic therapy is recommended. Typical colonising organisms, when injected into tissues planes via water jet, find the perfect setting for the development of a deep tissue infection or abscess.

In our case, the delay in presentation led to a failure to initiate antibiotic therapy, accounting for the development of infection. Caution should be taken to ensure appropriate culture and sensitivity is carried out where possible. Atypical water-based pathogens may be seen, such as Aeromonas Hydrophila, a facultative, anaerobe, Gram-negative bacillus which can progress to severe gas-forming infections when not treated appropriately. Previous case reports have described a necessity for intubation in high-pressure oropharyngeal trauma has caused oedema in the upper airway and oropharynx. As such, in the setting of acute high-pressure water jet injuries to the oropharynx, patients must be treated with a high index of suspicion for airway compromise or significant vascular injury. In our case, however, the patient presents a number of days following the initial injury in a stable condition with no suspicion or clinical features of imminent airway compromise or vascular injury.

High-pressure water injuries to the oral cavity are uncommon but have been reported in the literature. This is the first report of a case of high-pressure water injury which was associated with quinsy requiring surgical drainage.

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References

Comments: