Advanced imaging modalities are vital in the preoperative period, such as CT or MRI, conferring several advantages over a simple, exploratory approach. It helps confirm the diagnosis and identify tracts to, and from, the palpable abscess cavity. Often, the foreign body is readily identifiable and precise “coordinates” can be given to the surgeon, relative to palpable landmarks such as the larynx, trachea and angle of mandible (Figures 4 and 5). Any displaced vasculature can also be identified and the surgical approach planned, to avoid unnecessary trauma to the important head and neck neurovasculature. A true nidus removal surgery can then be performed through a relatively limited dissection (Figure 6).

Comparison between foreign material removed and its preoperative appearance on imaging helps increase confidence that the entire foreign body has been removed (Figure 7).

After adequate exploration, representative biopsies are taken for tissue culture and histopathology. The majority of the abscess wall is extracted (if safe to do so) to remove as much particulate foreign material as possible from the wound. The whole wound is then thoroughly lavaged (Figure 8) and closed routinely. Dead space can be managed with appropriate use of drains. Patients can be discharged, once comfortable, and usually placed on a course of broad-spectrum antibiotics (until results of the tissue culture are available) in addition to provision of appropriate analgesia.

Although the long-term prognosis for dogs with appropriately treated oropharyngeal injuries is usually good, clients should be warned of possible cervical abscess development after acute oropharyngeal perforations, or chronic cervical abscess recurrence after exploration. Both can be attributed to persistent residual foreign matter/nidus of infection. Advanced imaging modalities are strongly recommended before reoperation in recurrent cases.

Oesophageal injury

Oesophageal perforations have been associated with a significantly worse prognosis than oropharyngeal perforations. If screening radiographs show evidence of subcutaneous emphysema and an oesophageal tear is suspected, surgical exploration should be performed via a ventral midline approach. Foreign matter is removed, the wound lavaged and the oesophageal wall gently debrided and sutured. Drains are used to manage ongoing exudate production and gastrostomy tubes should be considered to bypass the healing oesophagus for 10 days, postoperatively. This surgery can be complicated, with a 36 per cent mortality rate recently reported for dogs with acute oesophageal stick penetration (Doran, 2008).

Summary

Stick injuries can represent themselves in many ways – from acute, uncomplicated oropharyngeal punctures to oesophageal penetration wounds with a significantly worse outlook. Prompt investigations will differentiate these two disorders, allowing each to receive appropriate treatment without delay. Chronic stick injuries often require advanced imaging to maximise chances of successfully removing all foreign material trapped within the head and neck tissues.

References


Figure 7 (inset). The removed foreign material is of the same shape and size as the foreign material identified on the pre-operative CT.

Figure 8. The absence cavity is explored and thoroughly lavaged, prior to closure.

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