PHARYNGEAL STICK INJURIES: A SURGICAL EMERGENCY

PHARYNGEAL STICK INJURIES IN DOGS are true emergencies and can be fatal, but differentiating between potentially life-threatening wounds and those which are less serious can be a challenge.

Paul Aldridge, in a recent session organised by The Webinar Vet, looked at how to overcome these challenges using a prompt, thorough and aggressive approach to diagnose and manage these cases in order to obtain the best possible outcome for the patient.

The first challenge faced by many first opinion practitioners is to ascertain whether the presenting patient has suffered an acute pharyngeal stick injury where an owner has not witnessed the actual event.

The signalment of a patient can be useful under these circumstances as studies have shown that most pharyngeal stick injuries are seen in younger larger breed dogs, and rarely seen in miniature breeds.

A number of presenting clinical signs can also raise suspicion of a pharyngeal stick injury and include dysphagia, cervical or pharyngeal swelling, cervical pain on flexion and palpation, anorexia, dysphagia, gagging, and salivation which is often blood-tinged.

The presence of cervical subcutaneous emphysema is another potentially serious finding and should always ring alarm bells that there has been significant pharyngeal damage with prompt surgical exploration always being necessary.

Whether a pharyngeal stick injury has been witnessed by the owner or whether the underlying cause remains a mystery, some patients will present collapsed due to their injury and Paul advised that, as with any collapsed patient, a major body assessment needs to be performed so any immediate life-threatening issues can be treated and the patient stabilised prior to any further examination.

Dyspnoea is one of the more common complications secondary to pharyngeal/laryngeal injury and oxygen needs to be administered to support these patients. A tracheostomy may also need to be performed where necessary. Hypoperfusion is another possible complication, and intravenous boluses of fluids need to be administered to resolve any perfusion deficits.

Paul said that once a patient has been stabilised, an urgent assessment of the injuries has to be made under general anaesthesia. The risk of delaying this assessment is high and if left too long could result in the patient developing mediastinitis and pneumomediastinum, which are both potentially fatal.

It is imperative these patients are assessed as quickly as possible, as the consequences of “let’s wait and see” could be dire even in those patients which appear bright and well on presentation.

Once anaesthetised, the oral cavity and pharynx of the patient should be thoroughly examined. The tongue should be carefully inspected, the tonsils should be checked including the tonsillar crypts, and the oral palatal surfaces should also be examined along with the pharyngeal and peri-pharyngeal mucosa.

Paul explained that the position of any wounds found helps to indicate the trajectory of the stick and the potential seriousness of the injury. For example, wounds found in the caudal hard palate indicate a rostral pharyngeal trajectory, whereas wounds found in the soft palate indicate a dorsal pharyngeal trajectory.

It is this dorsal trajectory which causes greatest concern as sticks can pass through the soft palate into the dorsal pharynx and from there move distally, causing injury to the oesophagus.

Other, often less serious trajectories include sublingual and – the most common – lateral pharyngeal injuries. Paul also advised that when one wound is found, it is imperative to look for further injuries as often the offending stick will have penetrated far deeper than the original superficial wound.

Radiography of the head and neck is another vital component of the diagnostic process. Cervical emphysema presents as gas lucencies within the neck which are outside of the trachea and oesophagus and its presence indicates significant damage to the pharynx and/or the oesophagus. These cases must be surgically explored using a cervical approach either in practice or at a referral centre.

Thoracic x-rays may also reveal gas extending down the fascial planes of the neck as well as a pneumomediastinum. There may also be improved contrast within the mediastinum allowing for easier identification of vessels and tracheal rings.

These findings, whether together or in isolation, indicate significant and potentially life-threatening damage and these cases must be surgically explored or referred immediately.

Endoscopy can sometimes be useful to image the oesophageal lumen, but oesophageal tears can often be difficult to appreciate using this technique and advanced imaging is more relevant for chronic rather than acute cases of pharyngeal stick injury.

**Treatment**

- **Intra-oral approach**

The intra-oral approach is usually suitable for sublingual, rostral pharyngeal and lateral pharyngeal injuries where there is no evidence of cervical emphysema or oesophageal puncture wounds.

The aim of this approach is to probe and explore any wounds via the mouth and to remove any foreign material, thereby reducing the chance of wound contamination.

Wounds should also be cleaned by packing the back of the dog’s throat and flushing any puncture wounds using a dog’s urinary catheter. Paul said he would usually leave all wounds open to prevent the sealing in of infection and would also use prophylactic antibiotics to reduce the chances of infection developing.

- **Cervical approach**

The cervical approach is appropriate where there is evidence of dorsal pharyngeal injuries, cervical emphysema and/or evidence pointing towards oesophageal rupture.

Firstly, if on oral examination a wound is found in the soft palate, it is imperative to lift the soft palate and look behind it for any dorsal pharyngeal injuries. If present, there is enough evidence to indicate a pharyngeal stick injury with a dorsal trajectory and cervical exploratory surgery is necessary.

If the cervical approach is warranted for any of the reasons stated above, Paul advised either referring to a centre that has the expertise to perform the procedure or moving straight to surgery in-house depending on the confidence, knowledge and experience of the attending vet.

When performing the cervical approach, the patient should be placed in dorsal recumbency with a sandbag underneath its neck. The dog should be given a wide clip and a midline incision to overcome any of the reasons stated above, Paul advised either referring to a centre that has the expertise to perform the procedure or moving straight to surgery in-house depending on the confidence, knowledge and experience of the attending vet.

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