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# Transcutaneous ultrasound guided removal of a wooden stick in a dog


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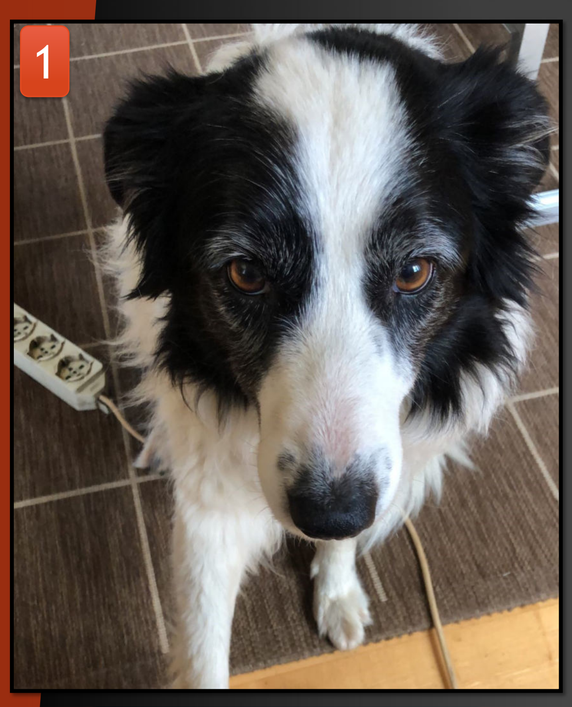
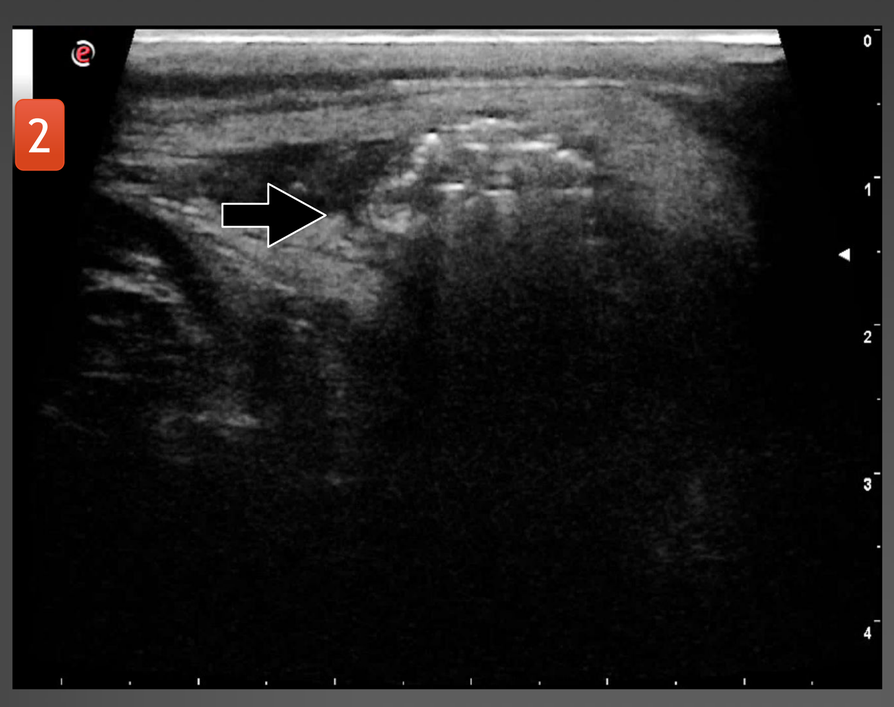
Superficial foreign bodies are a fairly common cause of clinical problems in companion animals [1], expecially in hunting breeds during the flowering period of grasses. They are often associated with complications such as abscesses, empyemas or granulomas [2,3], so progressive imaging methods are necessary to better plan the surgical approach [3].

1



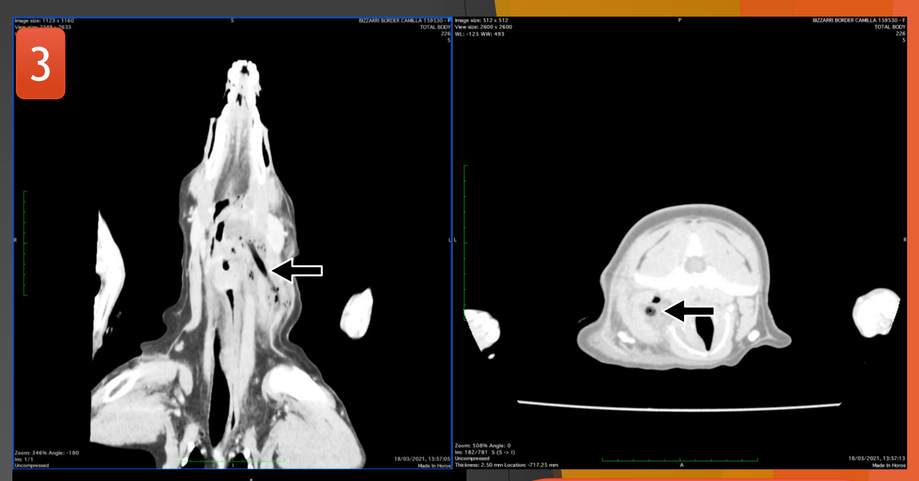
A 9-years-old female Border Collie was presented at the Veterinary Teaching Hospital of Perugia University for depression and a sudden onset of a swelling on the left neck region. Physical examination showed hyperthermia (39,9 °C) and a painful tumefaction localized immediately behind the left mandible branch.

2



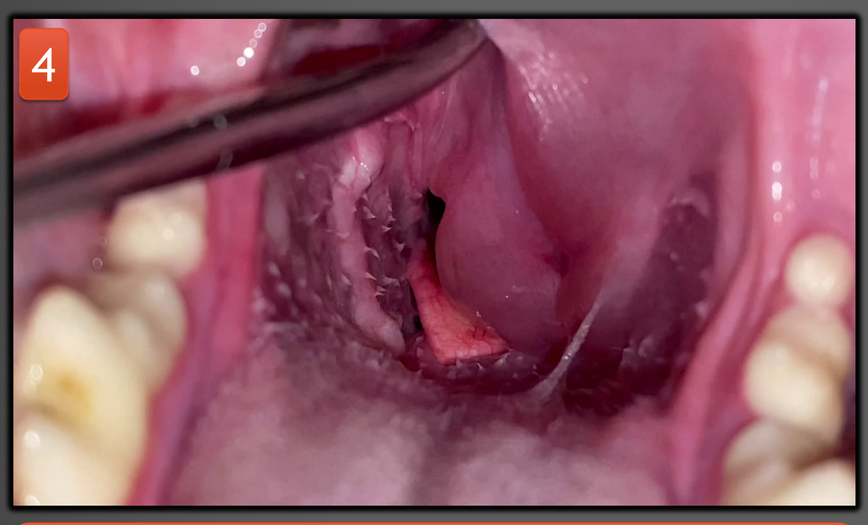
A preliminary ultrasound examination revealed a neoformation (arrow) caracterized by air bubbles trapped inside.

3



A CT scan pointed out a lesion compatible with the presence of a thin, elongated, tubular foreign body.
The arrows indicate the foreign body in a dorsal plan (up left), in an axial view (up right) and in a 3D reconstruction (down).

4



The inspection of the oral cavity revealed an oedematous area right in front of the epiglottis.

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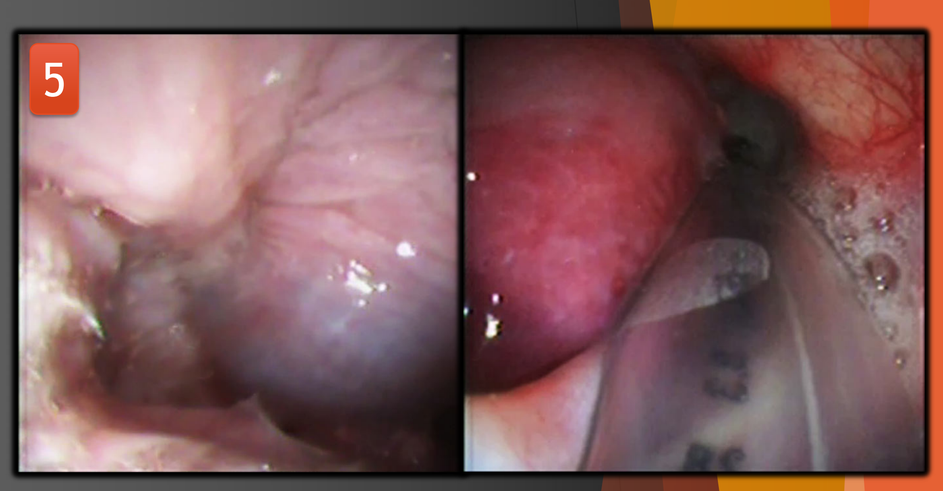
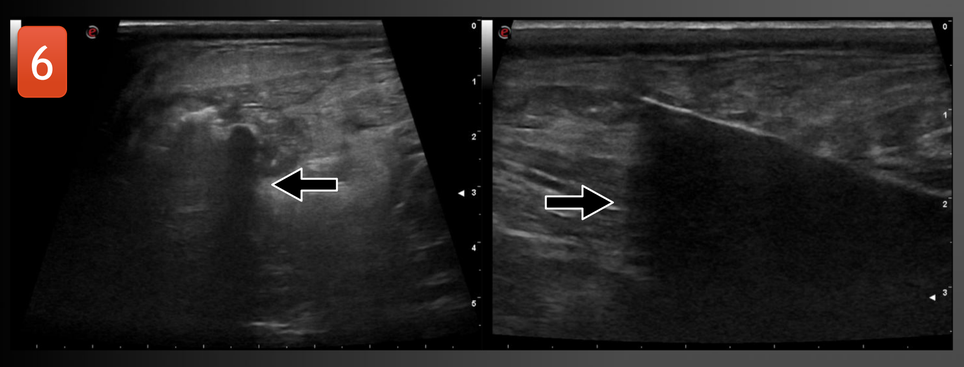


The endoscopic examination confirmed hyperemia and swollen soft tissues in the laryngeal-pharynx region but it was not possible to identify the entrance site of the foreign body.

6



During the general anesthesia, it was possible to reach the oedematous area with fingers and feel the foreign body through the soft tissues. By gently applying a low pressure from inside, it was viewable it transcutaneously via ultrasound scan: short axis view (left), long axis view (right). The hyperechoic surface and the clean anechoic shadow (arrows) demonstrate the hard nature of the foreign body.

7

Finally, by making a small skin incision, with ultrasound guidance, the foreign body (a wooden stick) was successfully removed.

## CONCLUSIONS

This clinical case confirms the importance of diagnostic imaging methods, in particular ultrasound, in the diagnosis and intraoperative guidance for the removal of foreign bodies. The combination of different methods allowed the quick detection of the foreign body, reduced surgical procedure time and a mininvasive and targeted approach to the lesion. Furthermore, the patient's recovery time and the morbidity of the methods have been drastically reduced.


**REFERENCES**

[1] Manfredi et al. (2020) Ultrasound-guided removal of soft tissue foreign bodies in companion animals: a case series. Vet Med-Czech 65, 49-55 [2] Laura et al. (2003) Ultrasonographic diagnosis of foreign bodies associated with chronic draining tracts and abscesses in dogs. Veterinary Radiology & Ultrasound, Vol 44, No 1, 2003, pp 66-70 [3] Christopher et al. (2016) Result of computed tomography in dogs with suspected wooden foreign bodies. Veterinary Radiology & Ultrasound, Vol 58, NO 2, 2017, pp 144-150.