



TRANSPHENOIDAL HYPOPHYSECTOMY IN DOGS AND CATS: A NEW TECHNIQUE FOR THE INTRAOPERATIVE DETECTION OF THE PITUITARY FOSSA

Objective Pituitary tumors can be treated by transphenoidal hypophysectomy in dogs and cats. A limiting factor is to accurately locate the pituitary fossa during surgery. The aim of the study is to determine the accuracy of locating the pituitary fossa with a novel instrument the “pituitary locator”, based on CT measurements.

Materials and Methods The preliminary study was an experimental study on ex-vivo canine model (Group 1 – ex-vivo). The second part of the study included all dogs and cats referred for transphenoidal hypophysectomy (Group 2 – in-vivo). The position of the pituitary fossa was established on CT scans and reported by the “pituitary locator” in both groups during transphenoidal hypophysectomy.

Results To date, 28 subjects have been included (Group 1 n=11; Group 2 n=17): 22 dogs and 6 cats. On CT scans, median length of the measurement established was 3,2cm (min 0,96-max 4,2cm): in dogs 3,5cm (0,96-4,2cm), in cats 2,25cm (2,1-2,53cm). The drill hole has been performed in the pituitary fossa in 100% of cases.

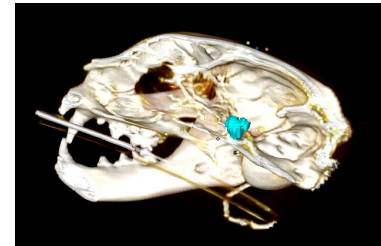
Conclusions The “pituitary locator” correctly identified the pituitary fossa in all the cases and therefore allowed to remove the pituitary gland. This new technique improves the identification of the pituitary fossa with a low margin of error and could reduce surgical times.

Future Proposal Further cases are needed to widen the population in cats and in dogs, increasing the sample size of brachycephalic and dolichocephalic breeds.

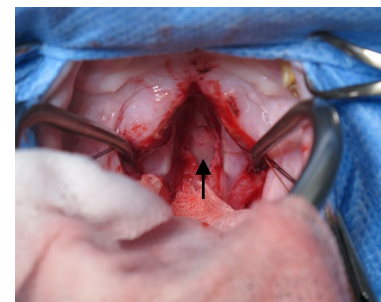
Period Abroad Royal Veterinary College, AURA Veterinary, Fitzpatrick Referrals (UK).

References

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3D reconstruction of CT scan of pituitary tumor in a cat (case 25).



Intraoperative view of the drill hole into the pituitary fossa (case 8).

