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RATHKE'S CLEFT CYST OF THE PITUITARY GLAND IN THE DOG – A CASE REPORT

Introduction

In humans 20% of pituitary glands contain macroscopically visible Rathke's clef cysts (RCCs), and almost all contain microscopically visible cysts. Most RCCs are asymptomatic, but larger cysts can cause symptoms such as headaches, disturbances in vision and endocrine dysfunctions. In dogs pituitary adenomas causing Cushing's disease are common and also non-functioning pituitary macro adenomas have been described. Surprisingly, RCCs have been rarely described in dogs. The aim of this case report is to describe the clinical, imaging, surgical and histological findings in a dog with a RCC.

Case description

A 6-year-old, female castrated Staffordshire Bullterrier presented with acute onset of neurological signs (nervous behaviour and hearing loss). Clinical signs resolved within several days without treatment. General physical examination, neurological examination and bloodwork showed no abnormalities. MRI of the skull revealed a pituitary mass with dimensions of 12.9 mm x 8.8 mm x 10.2 mm (HxWxL) with a pituitary height/brain area value of 0.73 (reference < 0.31 for non-enlarged pituitary glands). MRI findings (Fig. 1) were suggestive of possible necrotic or protein rich centre most likely representing tumour. Differential diagnoses include pituitary apoplexy and clinically non-functioning pituitary adenoma. Transsphenoidal hypophysectomy was performed as described previously [1, 2]. A thin-walled pituitary capsule filled with grey-blue slimy liquid was isolated, removed and sent in for histology and (IHC).

Results

Histopathologic examination revealed a Rathke's cleft cyst. The pituitary tissue contained a layer of pseudo-stratified cilindric epithelial cells and was immunopositive for ACTH, α-MSH and GH. The dog recovered uneventful and has a survival of 7 months at time of writing.

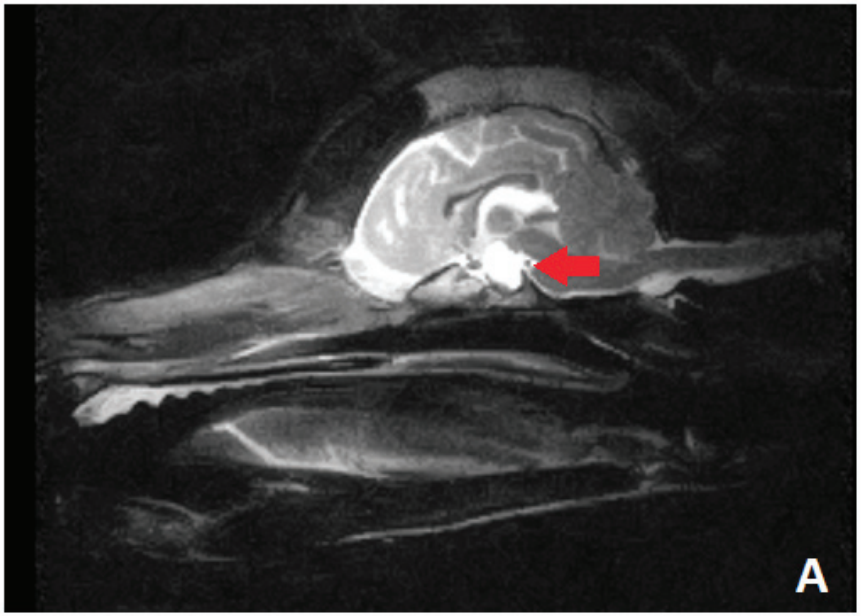
Discussion

Cystic lesions of the pituitary gland in animals are rare, 1 case has been described in a cat [3]. However, RCC should be included in the differential diagnosis of dogs that present with a pituitary mass without an endocrine syndrome.

References

1 NIEBAUER G. Transsphenoidal Hypophysectomy in the Dog A New Technique. Veterinary surgery 1988;17(6):296-303.
2 Meij B, Voorhout G, Rijnberk A. Progress in transsphenoidal hypophysectomy for treatment of pituitary-dependent hyperadrenocorticism in dogs and cats. Mol Cell Endocrinol 2002;197(1-2):89-96.
3 DeMonaco S, Koch M, Southard T. Syndrome of inappropriate antidiuretic hormone secretion in a cat with a putative Rathke's cleft cyst. J Feline Med Surg 2014;16(12):1010-1015.

CLINICAL CASES AWARD & RESEARCH AWARD



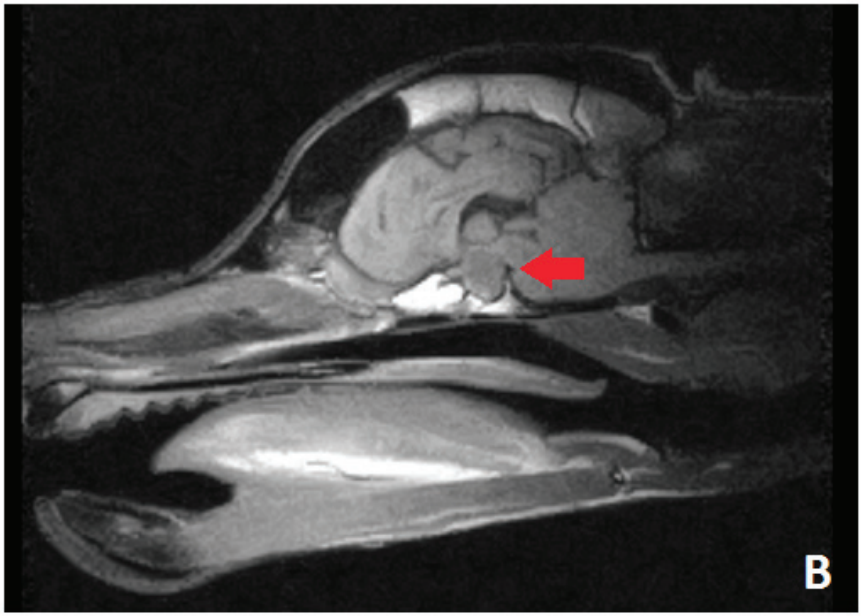


Fig 1. Magnetic resonance imaging of the skull.

A. Sagittal view of T2-weighed sequence shows a hyper intense pituitary gland (red arrow).

B. Sagittal view of T1 weighed sequence shows a hypo intense pituitary gland (red arrow). On both sequences the enlarged size of the pituitary is noted (height x width is 12.9 x 8.8 mm).