

# Rare case of round blue cell pituitary tumour with probable hypothalamic involvement

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## Introduction

We submit a rare presentation of round blue cell pituitary tumour complicated by cranial diabetes insipidus following transphenoidal surgery.

## Case history

- 47 year old lady
- Severe headache
- 10mm non functioning pituitary macro adenoma.
- Initial plan for conservative management - revised as she developed sixth cranial nerve palsy, bi temporal hemianopia and rapidly enlarging pituitary tumour to 20x18x19mm.
- Urgent Transphenoidal pituitary surgery
- Repeat surgery in 2 weeks as deteriorated.
- Pituitary tumour was found to be of fibrous consistency
- Histology confirmed poorly differentiated round blue cell tumour with mitotic index 50%, positive for CD99 and CD56, cytogenetically unclassified.
- INI-1 negative.
- Genetic studies awaited.

## Management and Discussion

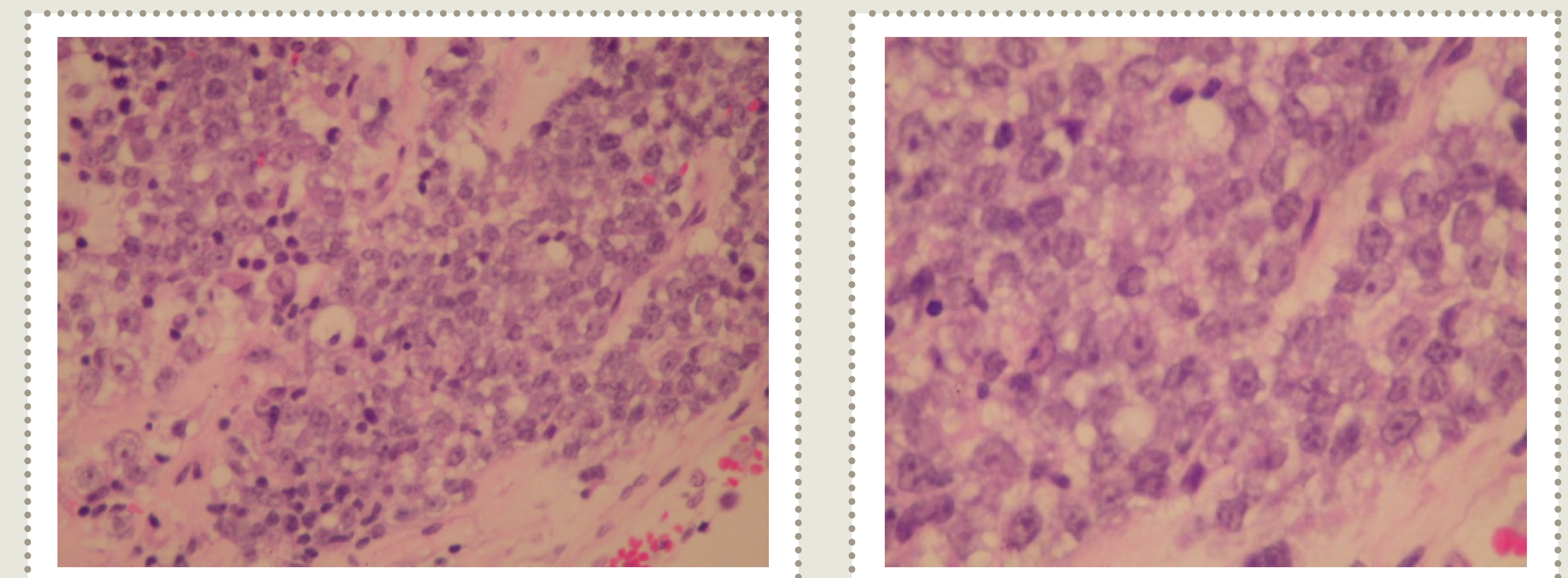
- On 1st post-op day, she developed polyuria and polydipsia, diagnosed with cranial DI and commenced on DDAVP.
- Next day she had a generalised seizure caused by rapidly developing hyponatraemia, managed with strict fluid balance and a fluid restriction of 1.5L daily with dynamic management DDAVP dose.
- Developed excessive thirst despite normal serum sodium and urine osmolality raising the possibility of hypothalamic thirst centre being affected by the aggressive pituitary tumour.
- Chemotherapy started.
- Patient had some improvement in her vision after 2 cycles of chemotherapy with overall prognosis very poor.
- Passed away after 4 weeks.

## Conclusion

We presented this case to illustrate a rare, aggressive pituitary malignancy which possibly has invaded the hypothalamus causing disruption to thirst mechanism in addition to causing CDI.

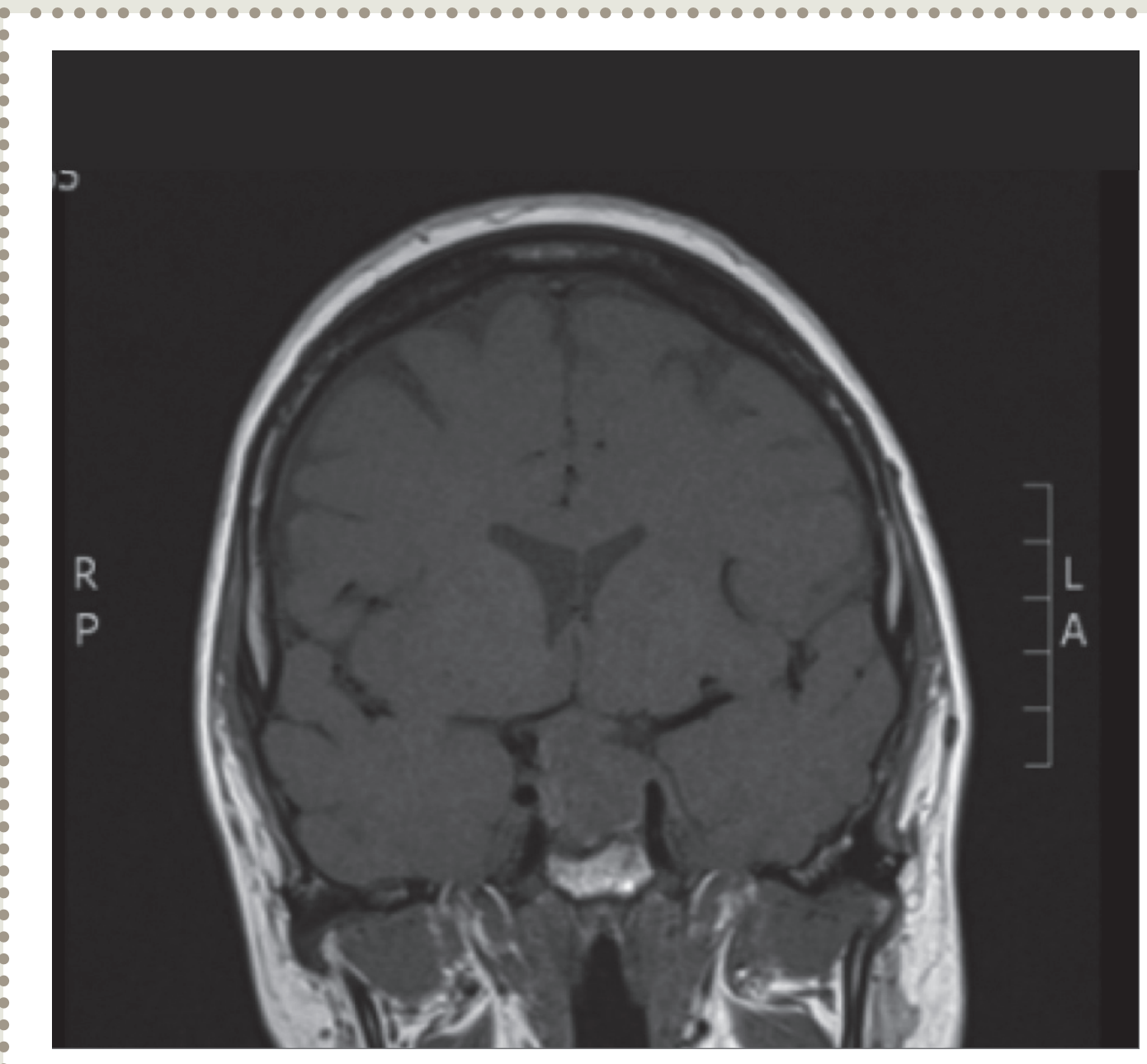
### Histology images

Haematoxylin and eosin, original magnification x 40. Cells with scanty cytoplasm and large vesicular nuclei with prominent nucleoli. Haematoxylin and eosin, original magnification x40. Cells with scanty cytoplasm and large vesicular nuclei with prominent nucleoli.

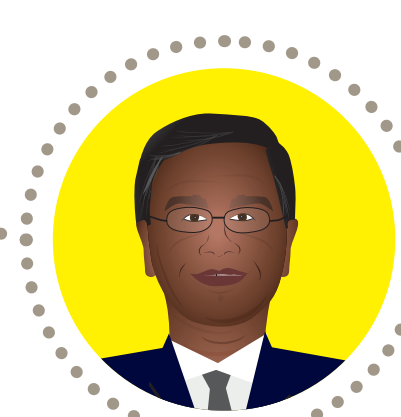
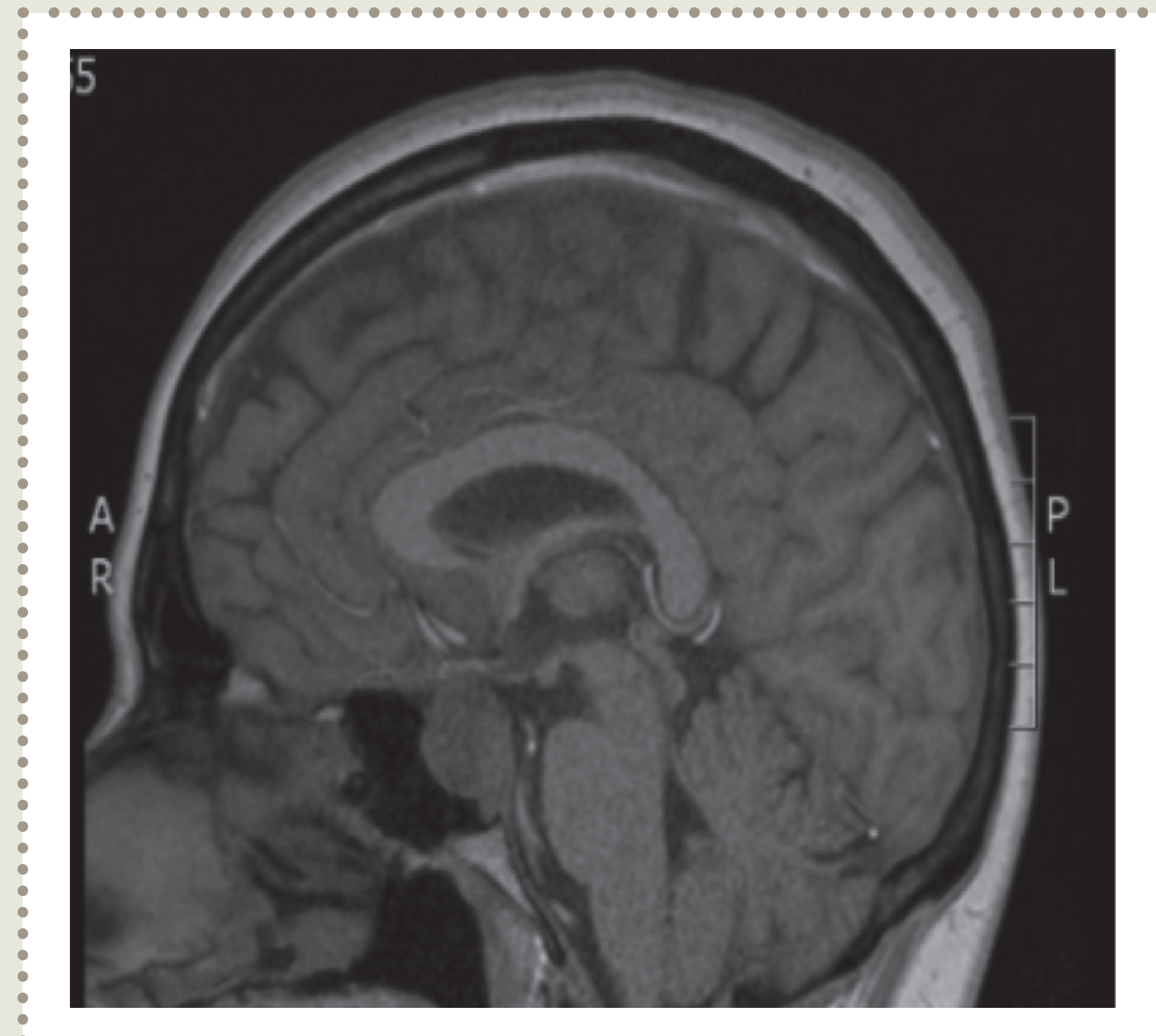


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Picture 1:  
MRI of pituitary fossa (coronal view)



Picture 2:  
MRI of pituitary fossa (sagittal view)



together we do the amazing