INTRODUCTION

A 60-year-old gentleman was brought by wife and 2 children to see us because of progressive memory loss and inappropriate behaviour namely, laughing for no reason.

CASE DESCRIPTION

The family noted a 10-month progressive worsening of memory. He consequently lost his job as a cashier due to poor performance. However, he was still capable of self-care. He became socially withdrawn, apathetic and inappropriate. Pre-morbidly, he had no past medical history and was described to be meticulous and intelligent.

On examination, he was disoriented to time, had anomic aphasia, and lacked insight. Neurological examination revealed bilateral anosmia. He had no visual deficits, motor weakness or frontal release signs.

Neuropsychological tests results

Mini-Mental State Examination (MMSE) score - 28/30 (cut off for subject with college education is 27)

Montreal Cognitive Assessment (MoCA) score - 24/30. (cut off for 60-79 is < 24)

Investigations

Initial blood investigations for work-up of dementia were normal.

MRI brain revealed a large extra-axial mass centered on the olfactory groove and planum sphenoidale displacing both frontal lobes. Mass effect and entrapment of the left lateral ventricle were also present (Figure 1).

Postoperatively, he had full recovery of functional and mental status within 2 weeks; he had diplopia on looking down status and anosmia. The diplopia resolved after 6 months but the anosmia remained.

He has since resumed work.

DISCUSSION

Early-onset dementias are defined by onset of first symptoms before the age of 65 and are uncommon. Average prevalence of dementia under the age of 65 years old is only 80 per 100,000 people[1]. Patients presenting with clinical features typical of dementia before the age of 65 years old should be regarded with a high index of suspicion. MRI is the diagnosis of choice for meningiomas as it more accurately evaluates en plaque and posterior fossa meningiomas, which may be missed on CT.

Olfactory groove and planum sphenoidale meningiomas constitute only 2% of all primary intracranial tumors[2].

Presentation is often made late stage as patients are asymptomatic before the meningiomas reach significant size (≥4cm) to compress the frontal lobe and optic nerve/optic chiasm[3]. The patient usually presents with dysexecutive syndrome (severe cognitive impairment, profound changes in personality) first noticeable primarily by family members, headache or visual symptoms. The good MMSE score of 27/30 in our patient is explained by the fact the MMSE score does not test executive function[4].

Anosmia is commonly present on physical examination, but it is not a typical presenting symptom[5].

A retrospective review of nine patients with meningioma showed reversal of cognitive impairment and behavioral changes occurs in six patients after resection [6]. Postoperative improvement of visual symptoms is dependent on the duration of preoperative visual symptoms[7]. Olfactory loss usually does not recover. The recurrence of olfactory meningiomas is dependent on the extent of resection and duration of follow-up. A review by Obeid et al found the recurrence rate to range from 5 to 41%[7].

CONCLUSION

- Not all progressive amnesia is dementia -- Early onset dementia is a red flag. MRI is gold standard investigation.
- Olfactory meningioma in this patient is accompanied by frontal lobe signs of social behaviour disinhibition, loss of executive ability to hold down his job as a cashier.
- The alertness of family members saved the day.

REFERENCES