

Calcified Intraventricular Meningioma in 82-years-old Woman: An Unusual Finding

Mohamed Kilani, Atef Ben Nsir, Marwa Zemmeli, Maher Hadhri, Mohamed Najib Hattab

Neurosurgery Department, Fattouma Bourguiba University Hospital, Medical University, Monastir, Tunisia

Article Information

Received: 3 January 2016

Accepted: 12 March 2016

Plagiarism software: Turnitin

Keywords:

Meningioma,
Intraventricular,
Calcified,
Elderly



Mohamed Kilani

ABSTRACT

Introduction: Primary Intraventricular meningiomas are rare and occur in much younger age group than other the intracranial meningiomas. Calcified intraventricular meningioma in elderly has never been reported before. **Case Report:** Here we report the unique case of an 82 year-old female who presented for headache and vomiting following a traffic accident. The neurological examination disclosed no abnormalities. The CT scan revealed a calcified Intraventricular meningioma. **Conclusion:** Since the patient was aged over 70 years and was asymptomatic, the lesion was not removed. Follow-up imaging showed no changes in the tumor.

INTRODUCTION

Meningiomas are generally benign, slow growing lesions arising from arachnoid cap cells. They are considered the second most common brain tumor.¹ they may occur at any age, however the prevalence increases with age, and the peak of incidence rate occurs in the 6th and 7th decades of life.¹ Those that are purely intraventricular in location are rare and constitute less than 3% of intracranial meningiomas.²

Here we report the unique case of a calcified intraventricular meningioma discovered incidentally following a mild head trauma in an 82 year-old woman.

CASE REPORT

An 82 year-old female with a history of blood hypertension suffered of a mild head trauma after pedestrian traffic accident. She complained of mild, intermittent headache and nausea. Her neurological state was normal. The brain computed tomography showed no fracture or hematoma but revealed a calcified mass in the occipital horn of the left lateral ventricle (Figure 1). The lesion was suggestive of a calcified meningioma since ependymomas and astrocytomas show rarely calcifications. The brain MR imaging was not intended, because the patient was claustrophobic. On the basis of the age of the patient and the incidental finding of the tumor, we decided to not remove the lesion. The risk of surgery was higher than the benefit of the tumor resection. Follow-up CT scan images, obtained 6 months and every year after the incident, revealed no diameter changes of the meningioma. The patient died 6 years after the incident of a myocardial infarction in another institution and did not undergo an autopsy for histology examination of the tumor.

Access this article online

Website:	Quick Response code
www.actamedicainternational.com	
DOI: 10.5530/ami.2016.2.35	

Corresponding Author:

Mohamed Kilani, Neurosurgery Assistant, Neurosurgery Department, Fattouma Bourguiba University Hospital, Medical University, Monastir, Tunisia.
Phone: (+216)97996000, Fax: (+216)73460309, E-mail: kilanineurochirurgien@gmail.com

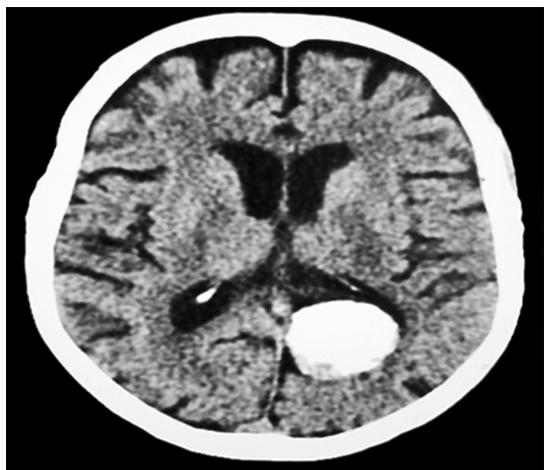


Figure 1: Axial CT scan revealing densely calcified meningioma located in the left occipital horn

DISCUSSION

Cerebral ventricles are rare sites for the occurrence of the central nervous system tumors. Tumors that are most likely to occur in the lateral ventricles are astrocytomas and ependymomas.³ Meningiomas occur rarely in the ventricles.⁴⁻⁵ Intraventricular meningiomas have prevalence in much younger age group than intracranial meningiomas of other sites.²⁻⁶ Though in children meningiomas constitute less than 4% of all intracranial tumors, an intraventricular location is reported in 9.4-19%.⁵⁻⁷ Occurrence in patients aged over 80 year is exceptional.³⁻⁶ There is no pathognomonic constellation of signs or symptoms for intraventricular meningiomas. They present mainly signs of increased intracranial pressure or symptoms can also be caused by pressure on the surrounding brain structures.⁶ The tumor often grows slowly to the substantial size before they become symptomatic.⁶ In this case, the tumor was totally calcified and remained asymptomatic.

On CT scan, intraventricular meningiomas are usually hyper dense with contrast enhancement and may contain foci of calcifications.⁴ These calcifications are found in 25% of reported cases.⁸ Totally calcified intraventricular meningiomas are exceptional. To the best of our knowledge this the second case reported in the literature but the unique case in elderly.³⁻⁹ Imaizumi et al⁹ reported a case of calcified psammomatous meningioma in the left ventricle that was asymptomatic for 16 years in a 23 year-old woman. Then when the symptoms did become active, they changed according to the movement and not the growth of the tumor. The lesion was removed and the post-operative course was uncomplicated. In our case, the patient was asymptomatic and the lesion was discovered incidentally.

Incidental finding on brain imaging have been defined as “previously undetected abnormality of potential clinical

relevance that are unexpectedly discovered and unrelated to the purpose of examination”.¹⁰ The increased use of CT and MR imaging to evaluate minor head injury, non-specific neurological symptoms has led to increased detection of incidental meningiomas.¹¹⁻¹³ The advisability of surgical intervention in elderly patients with asymptomatic meningiomas remains questionable. The risk of intervention must be balanced against the possibility of tumor growth and associated with a conservative approach. Herscovici et al,¹⁴ found a significant relationship between younger age and tumor growth rate ($p < 0.05$). All authors agree that younger age, initial diameter larger than 25 mm, lack of calcification, and the presence of edema were shown to be significant prognostic factor of tumor growth.¹¹⁻¹⁵ On the basis of these recommendations and the fact that operative morbidity and mortality are high in elderly patients,¹²⁻¹⁷ the advisability of surgical intervention deserves careful consideration.

In our case conservative treatment was a reasonable attitude since the patient was aged over 82 years, the lesion was asymptomatic and totally calcified.

CONCLUSION

Intraventricular meningiomas are rare and develop most likely in the lateral ventricles. Although they are known to occur in younger population than meningiomas in other locations, this case illustrates that they may occur in patients aged over 80 years and can be totally calcified. These cases, especially when the tumor is incidentally discovered, should be observed without any surgical intervention.

ACKNOWLEDGMENTS

The authors are grateful to Dr Houda Swei and Mr Amine Kilani for their technical support.

REFERENCES

- Jadid KD, Feychting M, Höijer J, et al. Long-term follow-up of incidentally discovered meningiomas. *Acta Neurochir* 2015; 157:225-30.
- Lyngdoh BT, Giri PJ, Behari S, et al. Intraventricular meningiomas: a surgical challenge. *J Clin Neurosci* 2007; 14:442-8.
- Bhatie HS, Singh P, Dutta V. Intraventricular meningiomas: a clinicopathological study and review. *Neurosurg Focus* 2006; 15: 20-3.
- Gelabert-González M, García-Allut A, Bandín-Diéguez J, et al. Meningiomas of the lateral ventricles. A review of 10 cases. *Neurocirugia (Astur)* 2008; 19:427-33.
- Liu M, Wei Y, Liu Y, et al. Intraventricular meningiomas: a report of 25 cases. *Neurosurg Rev* 2006; 29:36-40.
- Nakamura M, Roser F, Bundschuh O, et al. Intraventricular meningiomas: a review of 16 cases with reference to the literature. *Surg Neurol* 2003; 59:491-503.
- Germano IM, Edwards MS, Davis RL, et al. Intracranial

- meningiomas of the first two decades of life. *J Neurosurg* 1994; 80:447-53.
8. Bertalanffy A, Roessler K, Koperek O, et al. Intraventricular meningiomas: a report of 16 cases. *Neurosurg Rev* 2006; 29:30-5.
 9. Imaizumi S, Onuma T, Kameyama M, et al. Symptom changes caused by movement of a calcified lateral ventricular meningioma: case report. *Surg Neuro*, 2002; 58:128-30.
 10. Illes J, Kirschen MP, Edwards E, et al. Ethics. Incidental findings in brain imaging research. *Science* 2006; 311:783-4.
 11. Oya S, Kim SH, Sade B, et al. The natural history of intracranial meningiomas. *J Neurosurg* 2011; 114:1250-6.
 12. Chamoun R, Krisht KM, Couldwell WT. Incidental meningiomas. *Neurosurg Focus* 2011; 31:E19.
 13. Nakamura M, Roser F, Michel J, et al. The natural history of incidental meningiomas. *Neurosurgery* 2003; 53:62-70.
 14. Herscovici Z, Rappaport Z, Sulkes J, et al. Natural history of conservatively treated meningiomas. *Neurology* 2004; 63:1133-4.
 15. Kuratsu J, Kochi M, Ushio Y, et al. Incidence and clinical features of asymptomatic meningiomas. *J Neurosurg* 2000; 92:766-70.
 16. Chen ZY, Zheng CH, Tang Li, et al. Intracranial meningioma surgery in the elderly (over 65 years): prognostic factors and outcome. *Acta Neurochir (Wien)* 2015; 157:1549-57.
 17. D'Andrea G, Roperto R, Caroli E, et al. Thirty-seven cases of intracranial meningiomas in the ninth decade of life: our experience and review of the literature. *Neurosurgery* 2005; 56:956-61.

How to cite this article: Kilani M, Nsir AB, Zemmeli M, Hadhri M, Hattab MN. Calcified intraventricular meningioma in 82-years-old woman: an unusual finding. *Acta Medica International*. 2016;3(2):178-180.

Source of Support: Nil, **Conflict of Interest:** None declared.