Q12441

Case Report

Title

Successful Management of Parasagittal Meningioma in a 41-Year-Old Woman: A Case Report

Abstract

We present the case of a 41-year-old woman diagnosed with parasagittal meningiomas who underwent successful surgical resection. The primary tumor caused focal epilepsy and other neurological symptoms. The case highlights the challenges of managing parasagittal meningiomas in close proximity to critical vascular structures and the importance of a multidisciplinary approach to optimize surgical and postoperative outcomes.

Introduction

Meningiomas are common intracranial tumors, typically benign, arising from the meninges. Parasagittal meningiomas, in particular, can present unique challenges due to their proximity to the superior sagittal sinus. This report details the surgical approach and clinical evolution of a patient with parasagittal meningiomas.

Case Presentation

Admission Reason

A 41-year-old woman was admitted for elective resection of a left parasagittal frontal meningioma diagnosed after focal epileptic seizures.

Medical History

- Hypothyroidism.
- Asthma (sporadic use of inhalers).
- Focal epilepsy secondary to structural brain lesion (treated with Levetiracetam 1000 mg twice daily).

Surgical History

- Laparoscopic cholecystectomy.

Allergies

- Shellfish.

Current Illness

The patient presented with focal epilepsy secondary to a left parasagittal meningioma. Symptoms included episodes of language impairment, loss of consciousness, and tonic-clonic movements. A single episode of tongue biting occurred previously, which was not evaluated at the time. Admission was planned for definitive surgical treatment.

Investigations

Magnetic Resonance Imaging (MRI) and MR Venography

- A 29x24x34 mm left parasagittal extraxial lesion, compatible with a meningioma.

- Vasogenic edema with ventricular displacement.
- A 7 mm focal meningioma in the right frontal convexity.

Computed Tomography (CT) Scan

- Postsurgical changes with a small millimetric hemorrhage at the resection site.
- Pneumocephalus and persistent edema without significant complications.

Surgical Procedure

Technique

Parasagittal craniotomy.

Key Details

- **Left-sided lesion:** Total resection of a parasagittal meningioma adherent to the superior sagittal sinus, preserving vascular structures.
- **Right-sided lesion:** Complete resection of a nodular extraaxial meningioma with its dural

base.
- Closure involved miniplates for cranial fixation and reinforcement of the dural defect with Duragen and Tachosil.

Clinical Course

Immediate Postoperative Period

- Conscious and oriented, with no focal neurological deficits or seizures.

In the Recovery Unit

- Stable hemodynamics and effective pain management.
- Prophylactic anticonvulsant regimen maintained.

Ward Admission

- Surgical wound clean with no signs of infection.
- Independent ambulation.
- Afebrile with no postoperative complications.

Histological results pending at discharge.

Diagnosis

Primary Diagnosis

- Left parasagittal frontal meningioma.

Secondary Diagnoses

- Focal epilepsy secondary to structural lesion.
- Right frontal meningioma (asymptomatic).

Treatment at Discharge

Medications

- Dexamethasone (gradual tapering).
- Paracetamol and metamizole as needed for pain.
- Enoxaparin 4000 IU (thromboprophylaxis).
- Omeprazole during corticosteroid therapy.

Recommendations

- Relative rest.
- Daily wound care with Betadine and sterile dressing.
- Staple removal at a primary care center.

Follow-up Plan

- MRI before the follow-up appointment.
- Consultation with the treating physician.
- Neurology and Rare Diseases appointments.

Discussion

This case highlights the challenges and outcomes of managing parasagittal meningiomas. Surgical planning prioritized tumor resection while preserving the superior sagittal sinus, achieving seizure control and functional recovery. The case underscores the importance of a tailored multidisciplinary approach for complex intracranial tumors.

Conclusion

The successful resection of parasagittal meningiomas demonstrates the feasibility of preserving critical structures while achieving symptom resolution. Postoperative care and vigilant follow-up are essential to optimize long-term outcomes.

Keywords

Parasagittal meningioma, focal epilepsy, neurosurgery, surgical outcomes.