

## Peer Review

# Review of: "Hypopituitarism After Neurosurgery for Suprasellar Tumour: A Case Report"

Amy Jones<sup>1</sup>

1. Environmental Research Institute, Thurso, United Kingdom

This is a well-structured, clear, and clinically relevant case report addressing an uncommon but important complication—hypopituitarism after neurosurgery for a suprasellar meningioma. The manuscript covers background, objective, case details, discussion, and conclusion effectively. The case contributes valuable insight given the rarity of reported cases in the literature and underscores the need for postoperative endocrine vigilance.

## Strengths

- **Comprehensive Introduction:** Good overview of pituitary anatomy, physiology, and clinical significance of hypopituitarism.
- **Clear Case Description:** Detailed clinical presentation, imaging findings, surgical course, and postoperative complications are described with appropriate timing and lab values.
- **Clinical Relevance:** Highlights a rare but serious complication and the importance of screening, which has practical implications for neurosurgeons and endocrinologists.
- **Use of Relevant References:** Cites appropriate and recent literature to support statements.
- **Logical Flow:** The manuscript flows well from introduction through to conclusion.

## 1. Introduction

- The introduction effectively sets the clinical background but could be enhanced by:
  - Clarifying the incidence of hypopituitarism specifically following neurosurgical procedures for suprasellar tumours, even if rare, to emphasize the novelty.
  - More explicitly connecting meningiomas to the risk of hypopituitarism, since this is the focus.

- The sentence about the SciELO search could be clearer, e.g., specify "no previous reports of hypopituitarism post-neurosurgery for CNS tumours were identified in the SciELO database," which strengthens the rationale.
- Minor grammar:
  - "craniofaryngiomas" → "craniopharyngiomas"
  - "Bevengna" in the reference and text appears as "Benvenga" in refs; ensure consistency.

## 2. Objective

- Simple and clear. It aligns well with the content.

## 3. Case Report

- Excellent clinical detail and timeline.
- MRI lesion size: "4.3 mm x 3.6 mm" seems unusually small for a symptomatic meningioma causing compression; could this be cm instead of mm? (Please double-check and clarify)
- Consider including preoperative endocrine assessment if available—was there any baseline hormonal testing before surgery?
- When discussing ICP monitoring and complications, adding a brief note on how these might have contributed to pituitary injury would strengthen causal links.
- Hormone reference ranges should be consistent and specified for each hormone tested.
- Polyuria, polydipsia, and orthostatic hypotension are well-documented, but an explanation of the timeline in relation to surgery (e.g., days post-op) can help clarify progression.
- The management of hormone replacement is appropriate and well-described.
- The suspicion and diagnosis of diabetes insipidus (DI) are mentioned but could be expanded—was a water deprivation test or desmopressin trial performed?
- Including the patient's follow-up status/outcome after the last report would enhance completeness.

## 4. Discussion

- Good emphasis on early recognition and monitoring.
- Could include a brief overview of the pathophysiology of hypopituitarism after suprasellar surgery—e.g., mechanical damage, ischemia, oedema effects.
- Mention the importance of multidisciplinary management (neurosurgery, endocrinology).

- Including statistics or prior reported incidences of postoperative hypopituitarism from the literature (even from other tumour types or surgeries) would give context.
- Address limitations, such as lack of pre-op endocrine baseline or long-term follow-up.

## 5. Conclusion

- Well summarized.
- You might add a recommendation for standardized postoperative hormonal screening protocols based on the case.

## Additional Minor Points

- Formatting: Ensure consistent formatting of references and hormone units (e.g., pg/mL,  $\mu$ IU/mL).
- Ethics: Good to mention informed consent; consider briefly including IRB or institutional approval if applicable.
- Figures/Tables: Including an MRI image or hormonal lab results in a table could enhance reader comprehension.

This well-documented case report sheds valuable light on the rare but significant complication of hypopituitarism following neurosurgical resection of a suprasellar meningioma. The authors provide a detailed clinical narrative supported by appropriate investigations and thoughtful discussion, highlighting an important area that deserves greater clinical awareness and further study. With minor clarifications and expansions, this manuscript has strong potential to contribute meaningfully to the neurosurgical and endocrine literature.

Congratulations and best wishes,

Amy Jones

## Declarations

**Potential competing interests:** No potential competing interests to declare.