

# Preserving Facial Function in Recurrent Cholesteatoma with Lateral Canal Dehiscence: A Case Report



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## KEYWORDS

cholesteatoma, lateral canal dehiscence, facial nerve, recurrent surgery



## INTRODUCTION

Cholesteatoma is a chronic, destructive process of the middle ear. Despite multiple surgical interventions, recurrence can occur, especially in cases involving complex anatomical variations. This case report presents a patient with recurrent cholesteatoma and an extensive lateral canal dehiscence, highlighting the surgical challenges and management strategies.



## METHODS

This case report focuses on a 53-year-old woman who had a mastoidectomy in 2018 due to cholesteatoma. She was scheduled for surgery in 2024 after a new MRI revealed recurrent cholesteatoma, lateral canal dehiscence, and a lateral semicircular canal fistula. We reviewed the patient's medical records, including preoperative assessments, surgical notes, and post-op follow-ups. We also did a thorough literature search on PubMed using keywords like 'cholesteatoma', 'lateral canal dehiscence', 'facial nerve', and 'recurrent surgery' to find related research.



## CASE PRESENTATION

A 53-year-old female with past medical history of chronic obstructive pulmonary disease and sleep apnea, presented with recurrent cholesteatoma. Despite previous surgical intervention in 2018 due to cholesteatoma, the patient continued to experience hearing loss and ear pain in 2024. Subsequent imaging revealed a recurrent cholesteatoma, a dehiscence of the lateral canal, and a fistula. Patient is taken for Surgical exploration. A mastoidectomy was performed without preservation of the left posterior wall. Cholesteatomatous tissue was removed, revealing a dehiscent facial nerve. Intraoperative facial nerve monitoring demonstrated adequate function. The lateral canal dehiscence, measuring approximately 2 cm with a solution of continuity but no active cerebrospinal fluid leak, was closed using bone wax and fascia.



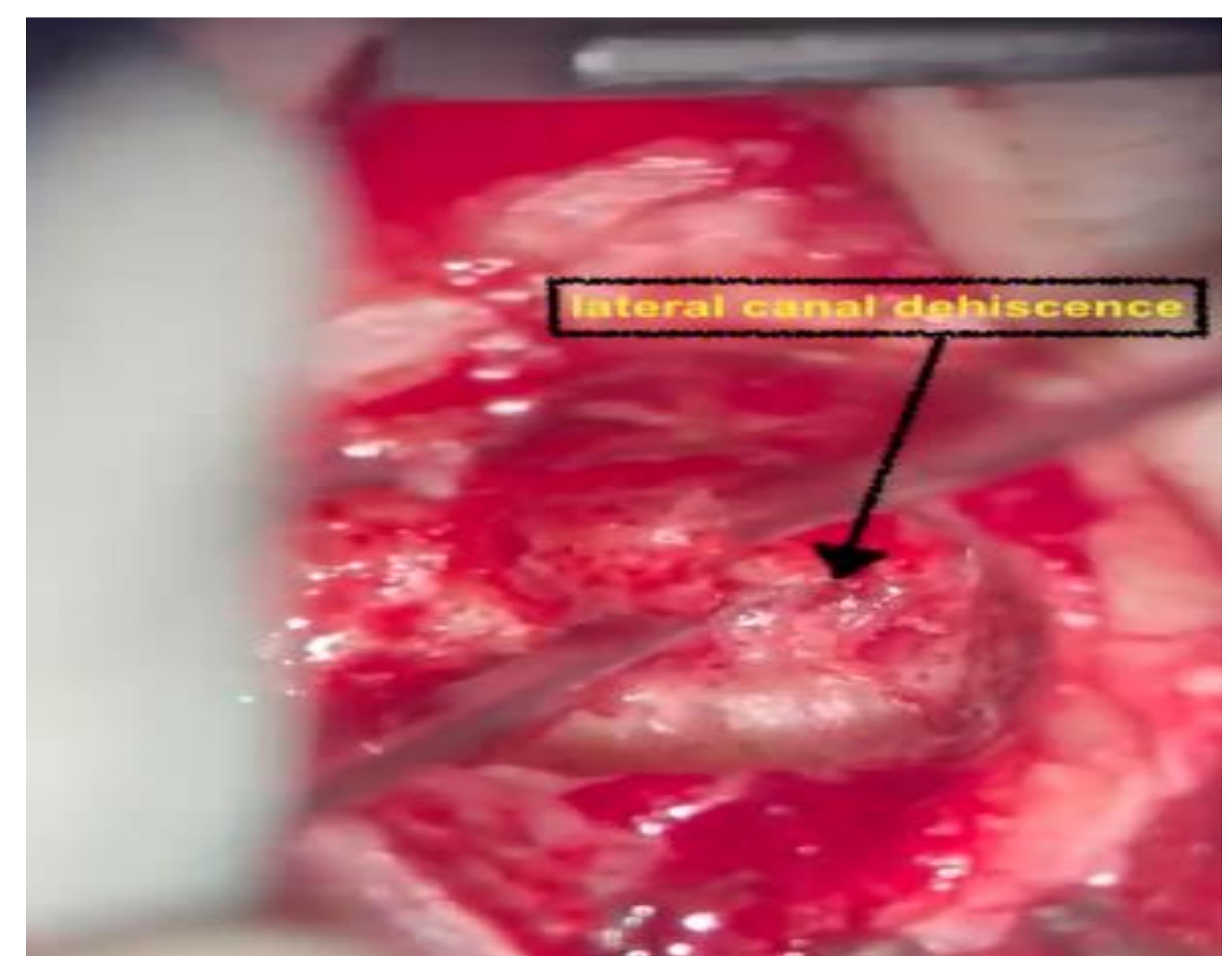
Figure 1. Tomography finding. Lateral canal dehiscence.



## RESULTS

The patient presented with recurrent cholesteatoma following a previous mastoidectomy performed in 2018. Subsequent surgery was undertaken to address the recurrent cholesteatoma and a pre-existing semicircular canal fistula. Microscopically the cholesteatomatous tissue was successfully removed, and the dehiscence was closed using bone wax and fascia.

Postoperative MRI demonstrated no evidence of residual cholesteatoma. The patient was discharged from the hospital without experiencing vertigo or hearing loss.



2. Intraoperative finding. Lateral canal dehiscence.



## DISCUSSION

Recurrent cholesteatoma with lateral canal dehiscence poses significant surgical challenges due to the risk of facial nerve injury, meningitis, and hearing loss. The decision to preserve or obliterate the dehiscence is often complex and depends on various factors, including the size of the dehiscence, the extent of bone erosion, and the patient's preoperative hearing.



## CONCLUSION

This case highlights the challenges of managing recurrent cholesteatoma, particularly when complicated by extensive lateral canal dehiscence. Careful preoperative planning, intraoperative decision-making, and close postoperative follow-up are essential for optimal patient outcomes.



## REFERENCES

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