

Letter to the Editor

Comments on “Detection of cholesteatoma recurrence by magnetic resonance imaging (DWI non-EPI sequence) – how can we minimise false results?”

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Dear Editor,

We read with great interest the study by Pietraszek *et al.* [1], which evaluated the diagnostic performance of non-echo-planar diffusion-weighted imaging (DWI non-EPI) in detecting recurrent cholesteatoma. This study presents a clinically meaningful dataset from 156 postoperative cases and offers valuable recommendations to reduce false findings, particularly the practical emphasis on pre-imaging ear canal cleaning and interval-based imaging. Additionally, the retrospective design, combined evaluation by both radiologists and otosurgeons, and focus on real-world diagnostic pitfalls add to its practical relevance. Nonetheless, several methodological limitations of this otherwise commendable study merit further attention.

First, the absence of a control arm using conventional echo-planar imaging (EPI) sequences limits the comparative specificity and generalizability. Without such a comparator group, the observed 87% sensitivity lacks contextual benchmarking, making it difficult to evaluate the true incremental utility of non-EPI protocols in settings without access to advanced magnetic resonance imaging systems [2].

Second, the study reported a notably low negative predictive value of 18.2%, but the authors did not fully explore the clinical ramifications of this finding. A negative imaging result in nearly one of the five patients may still

indicate a residual lesion, particularly mural or sub-3 mm cholesteatomas [3]. However, the authors proposed a surveillance algorithm relying on serial imaging at 1, 3, and 5 years after surgery. This approach risks the delayed diagnosis of false negatives, especially when patients are asymptomatic. The potential for irreversible ossicular erosion or labyrinthine fistula formation during this surveillance window necessitates greater caution and possibly earlier second-look exploration in high-risk cases. The inclusion of surgical thresholds based on hearing loss or persistent membrane perforation, while pragmatic, may inadvertently defer essential interventions.

Third, there is limited granularity in describing the inter-reader variability between otosurgeons and radiologists. Although discrepancies were “discussed and resolved collaboratively,” kappa statistics or reproducibility metrics were not provided. Such data are critical in a field where the interpretation of subtle DWI hyperintensities can be highly subjective and influenced by post-surgical changes or prosthetic materials [4]. Given the increasing decentralization of imaging reviews [5], this omission may hinder protocol adoption in centers lacking integrated ear, nose, and throat (ENT)-radiology collaboration.

Finally, while the study suggests a decline in false positives over time due to operator experience and improved pre-scan protocols, it does not provide an opportunity to quantitatively stratify diagnostic accuracy across temporal

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Authors' contribution:

A Study design · B Data collection · C Statistical analysis · D Data interpretation · E Manuscript preparation · F Literature search · G Funds collection

cohorts. A subgroup analysis comparing early (2015-2018) and late (2019-2021) scan performance could objectively illustrate the learning curve, guiding resource allocation, and training in newer centers adopting DWI non-EPI imaging.

In conclusion, the authors' contribution to optimizing DWI non-EPI protocols for postoperative cholesteatoma surveillance is timely and clinically relevant. However, additional comparative data, standardization of interpretive metrics, and a cautious approach to interpret nega-

tive scans are essential to minimize missed diagnoses and improve patient outcomes.

Disclosures

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