

REVIEWER'S REPORT

Manuscript No.: IJAR- 59127

Title: Trichilemmal Carcinoma of the Scalp: A Clinical and Histopathological Diagnostic Challenge.

Recommendation:

Accept after minor revision

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality			✓	
Clarity			✓	
Significance	✓			

Reviewer's ID: Bilquees Hamza

Detailed Reviewer's Report

Peer Review Report

Article Title: Trichilemmal Carcinoma of the Scalp: A Clinical and Histopathological Diagnostic Challenge

Journal Target: General Dermatology / Surgical Oncology / Clinical Pathology

General Overview

The manuscript entitled "**Trichilemmal Carcinoma of the Scalp: A Clinical and Histopathological Diagnostic Challenge**" presents a well-documented clinical case report of a rare malignant adnexal tumor in an 83-year-old female patient. The manuscript traces the presentation of a 2.5 cm exophytic, nodular lesion located on the midline parietal scalp that clinically simulated a cutaneous squamous cell carcinoma (SCC). The authors outline the diagnostic pathway, starting from a initial incisional biopsy suggesting a malignant proliferating trichilemmal tumor (MPTT) to definitive wide local oncologic excision with intraoperative frozen-section assessment of the deep plane, followed by immediate single-stage reconstruction utilizing a helical scalp rotation flap.

Histopathological evaluation confirmed trichilemmal carcinoma (TC) characterized by prominent trichilemmal keratinization, glycogen-rich clear cells, marked cytonuclear atypia, and frequent atypical mitoses, with clear peripheral (7 mm) and deep (2 mm) surgical margins. The clinical outcome post-surgery was favorable, showing optimal cosmetic flap integration and no evidence of local recurrence or distant metastasis at the 1-year follow-up mark.

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Overall, the manuscript addresses an important topic within cutaneous surgical oncology and dermatopathology. Because trichilemmal carcinoma is frequently misdiagnosed as squamous cell carcinoma or basal cell carcinoma due to overlapping macro-morphological features, additional clinical reporting helps expand the understanding of its natural history, diagnostic evaluation, and operative management. The manuscript is structured clearly, follows standard medical case report conventions, and is supported by high-quality surgical intraoperative photographs and histopathological microscopic slides. However, several methodological, theoretical, and editorial refinements are necessary to elevate the manuscript to a high-impact publication standard.

Suggestions for Improvement

1. Histopathological and Immunohistochemical Analysis

- **Absence of Immunohistochemistry (IHC) Panel:** The diagnosis relies entirely on routine Hematoxylin and Eosin (H&E) staining. While the histopathological features shown in Figure 4 strongly support trichilemmal differentiation, the distinction between TC, clear-cell Squamous Cell Carcinoma (ccSCC), and Malignant Proliferating Trichilemmal Tumor (MPTT) often necessitates IHC staining. The authors are strongly encouraged to perform staining for CD34 (typically positive in TC outer root sheath cells), Cytokeratin 7 (CK7), Epithelial Membrane Antigen (EMA), and p63/p40 to definitively rule out ccSCC. If tissue blocks are no longer available to perform these stains, this limitation must be comprehensively discussed in the main text with justification.
- **Microscopic Inset Captions in French:** In Figure 4 (and in the lower portion of the image panel), the figure sub-labels and descriptions (e.g., "*Prolifération tumorale faite de cordons...*", "*Cellules tumorales à cytoplasme...*", "*Atypies cytonucléaires...*") appear in French. Because the manuscript is submitted in English, all embedded text within the figures must be translated into English or cleanly cropped out to maintain professional consistency.
- **High-Resolution Micrographs and Scale Bars:** Ensure that scale bar labels on Figure 4 are clearly readable at standard print dimensions and that high-resolution microphotographs are provided without compression artifacts.

2. Clinical Case Presentation & Operative Details

- **Preoperative Staging Findings:** In Section 2, the authors note that the staging thoraco-abdomino-pelvic CT revealed incidental pulmonary abnormalities, leading to a diagnosis of active pulmonary tuberculosis. The manuscript should briefly clarify how this co-morbidity was managed in the perioperative setting (e.g., initiation of anti-tubercular therapy, anesthetic considerations during flap surgery) to provide a complete clinical picture.

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- **Margin Specifications:** The text states that a 10 mm clinical margin was taken, yielding a final microscopic peripheral margin of 7 mm and a deep margin of 2 mm. It would be beneficial to specify whether galea aponeurotica or periosteum was excised *en bloc* to achieve the deep clear plane, as Figure 2a demonstrates exposed outer cranial table.
- **Flap Design Narrative:** Elaborate slightly on the surgical planning of the helical rotation flap. Detailing the design considerations for scalp defect closure under minimal tension helps enhance the practical surgical utility of the report.

3. Discussion & Literature Context

- **Deepening the Differential Diagnosis:** The differential diagnosis section should be expanded to compare TC systematically against other clear-cell scalp neoplasms, such as metastatic renal cell carcinoma (RCC), clear-cell basal cell carcinoma, and hidradenocarcinoma. A brief structured comparative table highlighting histological patterns, clear-cell changes, and key IHC markers would significantly increase the educational value for clinical readers.
- **Prognostic Factors & Follow-up Protocols:** Although 1-year disease-free survival is documented, TC can display late local recurrences. The authors should expand upon published recurrence rates, discussing high-risk features (such as tumor thickness, depth of invasion, and lymphovascular invasion). Standardized follow-up recommendations (e.g., surveillance frequency, clinical palpation of regional lymph nodes) should be emphasized in the narrative.
- **Treatment Modalities (Mohs vs. Wide Excision):** Expand the discussion contrasting conventional wide local excision (WLE) with Mohs Micrographic Surgery (MMS). Highlighting margin control challenges specifically on the scalp would contextualize why a 10 mm margin with intraoperative frozen sections was selected in this case.

4. Structure, Style, and Language Refinements

- **Figure Legends and Citations:** Ensure all figure callouts in the text align precisely with the figure sub-panels. Verify that Figure 1, Figure 2, Figure 3, and Figure 4 are uniformly cited across Section 2.
- **Grammar and Syntax:** Perform a thorough proofreading pass to smooth minor stylistic awkwardness in English phrasing (e.g., standardizing medical terminology such as "phthisiological assessment" to "pulmonary evaluation for tuberculosis infection").
- **Reference Formatting:** Ensure consistent reference formatting according to the target journal's style guide (e.g., expanding "Sun J, et al." in Reference 2 to include the full list of authors if required by the journal guidelines).

Final Recommendation

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

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Decision: Accept with Minor Revisions

The case report is well-conceived, clinically relevant, and effectively illustrates the diagnostic and surgical challenges posed by scalp trichilemmal carcinoma. The surgical outcome and histopathological descriptions are clear and informative. Upon addressing the noted minor revisions—specifically translating/editing French insets in Figure 4, clarifying the management of the patient's concurrent tuberculosis, expanding on the differential diagnostic criteria (including IHC limits), and refining stylistic phrasing—the manuscript will be fully suitable for publication.

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