INPLASY

Perifollicular Elastolysis: A Systematic Review of Clinical Characteristics, Histopathology, and Therapeutic Outcomes

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 14 December 2025 and was last updated on 14 December 2025.

INTRODUCTION

Review question / Objective To systematically synthesize the published evidence on perifollicular elastolysis, focusing on clinical characteristics, histopathologic features (including elastic fiber alterations), and reported therapeutic outcomes and safety.

Condition being studied Perifollicular elastolysis is a rare cutaneous disorder characterized by perifollicular, skin-colored to yellowish papules and selective loss or marked reduction of elastic fibers surrounding hair follicles on histopathology, resulting in clinically apparent follicular papular lesions, most commonly involving the trunk and proximal extremities.

METHODS

Participant or population Individuals of any age, sex, and ethnicity with a diagnosis of perifollicular elastolysis established by clinical assessment with supportive histopathology and/or by histopathologic confirmation (including demonstration of perifollicular elastic fiber loss on routine histology and/or elastic stains). Studies will be eligible if patient-level or extractable case-level data are available.

Intervention Any management strategy for perifollicular elastolysis will be eligible, including topical therapies, systemic therapies, procedural/device-based interventions, and observation/no treatment. Interventions will be extracted as reported (agent/procedure, regimen, duration, and follow-up) and evaluated descriptively in relation to clinical response, recurrence, and adverse events.

Comparator No comparator is required because the expected evidence base is predominantly descriptive (case reports/series). When comparative data are available, we will extract and summarize outcomes across different treatment modalities, including treated versus observation/no treatment, and between-treatment comparisons within or across reports.

Study designs to be included Case reports, case series, observational studies (cross-sectional, cohort, case–control), and interventional studies/ clinical trials reporting primary patient data on perifollicular elastolysis. Reviews, editorials, commentaries, and studies without extractable primary data will be excluded.

Eligibility criteria Inclusion criteria: Primary studies reporting patients with perifollicular elastolysis (clinical and/or histopathologic diagnosis) with extractable data on at least one of the following: clinical presentation/anatomical distribution, histopathologic features (including elastic fiber findings), comorbidities/associated conditions, or treatment and outcomes. Eligible designs include case reports, case series, observational studies, and interventional studies. Full-text articles published in English.Exclusion criteria: Narrative reviews, systematic reviews/ meta-analyses (reference lists will be screened), editorials, expert opinions, and letters/abstracts without sufficient primary patient data; animal or in vitro studies; duplicate publications (most complete report retained); and articles describing other elastolysis entities without separable data specific to perifollicular elastolysis.

Information sources Electronic databases will include MEDLINE (via PubMed), Scopus, and the Cochrane Central Register of Controlled Trials (CENTRAL). In addition, we will perform backward and forward citation tracking of included studies and relevant reviews. Where key information is missing or unclear, corresponding authors may be contacted for clarification.

Main outcome(s) Main outcomes are: (1) Clinical characteristics of perifollicular elastolysis, including lesion morphology, symptoms, age at onset, disease duration, anatomical distribution, and reported triggers/course; (2) Histopathologic features, including key microscopic findings and evidence of perifollicular elastic fiber loss/reduction (as reported on routine histology and/or elastic stains); and (3) Therapeutic outcomes, including type of treatment, clinical response (complete/ partial/no response as reported), time to response when available, recurrence, adverse events, and duration of follow-up. Outcomes will be synthesized descriptively; effect measures will be reported as frequencies/proportions and narrative summaries given the anticipated predominance of case-based evidence.

Quality assessment / Risk of bias analysis Methodological quality and risk of bias will be assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklists, selecting the checklist appropriate to each study design (e.g., case reports, case series, and analytical observational studies). Two reviewers will independently appraise each included study; disagreements will be resolved by discussion and, if necessary, a third reviewer. Item-level judgments (Yes/No/Unclear/Not applicable) will be presented in tabular form, and the overall certainty of conclusions will be interpreted in light of the identified methodological limitations.

Strategy of data synthesis Data will be synthesized primarily using descriptive and narrative methods due to the anticipated rarity of the condition and predominance of case-based evidence. Extracted variables will be grouped into: (1) clinical characteristics and anatomical distribution; (2) histopathologic findings, including elastic fiber alterations and staining methods; (3) associated conditions/comorbidities; and (4) treatment modalities and outcomes. We will summarize continuous variables using medians (interquartile ranges) or means (standard deviations), as appropriate, and categorical variables using frequencies and proportions. Treatment responses will be categorized as complete, partial, no response, or not reported, and recurrence and adverse events will be summarized when available. If sufficient homogeneous comparative data are identified, a quantitative synthesis may be considered; otherwise, findings will be reported as structured narrative summaries supported by summary tables.

Subgroup analysis Planned subgroup analyses (where data permit) will be descriptive and may include stratification by age group (paediatric vs adult), sex, anatomical distribution (truncal vs non-truncal), presence of reported associated conditions (e.g., inflammatory dermatoses or other comorbidities), and diagnostic confirmation method (histopathology with elastic stains vs routine histology/clinical diagnosis). If adequate data are available, treatment outcomes will also be summarized by treatment modality (topical, systemic, procedural, or observation).

Sensitivity analysis Sensitivity analyses are not anticipated because the expected evidence base is predominantly case reports/series and other non-comparative designs. If sufficient data are available, we will perform a sensitivity analysis by repeating key descriptive summaries after excluding studies judged to be at higher risk of bias/low methodological quality (based on JBI appraisal) and/or excluding cases without

histopathologic confirmation to evaluate the robustness of the main findings.

Language restriction English.

Country(ies) involved Thailand.

Keywords Perifollicular elastolysis; elastolysis; follicular papules; elastic fiber loss; histopathology; Verhoeff–Van Gieson; Orcein; treatment outcome; case report; systematic review.

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