Vulvar Manifestations of Lupus, Sjogren's Syndrome, Systemic Sclerosis and Dermatomyositis: A Scoping Review Protocol

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Rationale

Vulvar manifestations of systemic autoimmune diseases represent a clinically important yet under-characterized area within dermatology. Conditions such as systemic lupus erythematosus (SLE), cutaneous lupus erythematosus (CLE), neonatal lupus erythematosus (NLE), Sjögren's syndrome, systemic sclerosis (scleroderma), and dermatomyositis have well-described cutaneous manifestations in the literature; however, their vulvar disease presentation is not well synthesized. This gap in the literature presents challenges for dermatologists in recognizing, diagnosing, and managing vulvar manifestations of these autoimmune diseases.

Existing evidence demonstrates that vulvar involvement in various autoimmune conditions is highly variable.[1-3] Understanding vulvar manifestations of autoimmune disease requires a comprehensive synthesis of the existing literature. This is best accomplished through a scoping review, which allows for systematic mapping of heterogeneous evidence and identification of knowledge gaps to guide future research. This review protocol is based on the guidelines from the Joanna Briggs Institute (JBI) and follows guidelines from the Preferred Reporting Items Checklist for Systematic Reviews and meta-analyses (PRISMA) extension for Scoping Reviews Checklist.

Our scoping review aims to systematically characterize the spectrum of vulvar manifestations associated with selected systemic autoimmune diseases encountered in the dermatology clinic, including systemic lupus erythematosus (SLE), cutaneous lupus erythematosus (CLE), neonatal lupus erythematosus (NLE), Sjögren's syndrome, systemic sclerosis (scleroderma), and dermatomyositis. Specifically, we aim to synthesize available evidence on clinical presentation, lesion morphology, anatomic distribution, histopathologic findings, and diagnostic approaches, as well as reported treatment strategies and clinical outcomes. We hope to identify patterns in clinical findings and knowledge gaps to improve clinical recognition and inform future research in this underrepresented area within dermatology.

Objective

We will answer the following questions:

What vulvar manifestations are reported in association with systemic autoimmune diseases?
What clinical features, lesion morphologies, and anatomic distributions are described in the literature?
What diagnostic approaches, including histopathologic findings and adjunct testing, are used to evaluate vulvar involvement?
What treatment strategies and outcomes are reported?
What gaps exist in the literature regarding vulvar manifestations of autoimmune diseases?

Protocol and Registration

This protocol will be registered via Northwestern's Digital Repository PRISM. PRISM can be accessed via Google prior to initiation of the scoping review. A link will also be generated.

Eligibility criteria

- Inclusion criteria

Studies must include patients of any age, with a confirmed diagnosis of systemic lupus erythematosus (SLE), cutaneous lupus erythematosus (CLE), neonatal lupus erythematosus (NLE), Sjögren's syndrome, systemic sclerosis (scleroderma), and dermatomyositis. Studies must report on vulvar manifestations associated with the above conditions. Vulvar involvement includes any cutaneous, mucosal or structural changes to the vulva (labia majora, labia minora, clitoris, vestibule, or perineum) attributable to one of the autoimmune conditions above. No geographical restrictions will be applied. Eligible studies include case reports, case series, case-control studies, and cohort studies. Randomized clinical trials will be included if they report vulvar manifestation data. Studies must be published in English or re-published to English from another language.

- Exclusion Criteria

Studies will be excluded if they
1) do not conclude the vulvar lesions are associated with the autoimmune diseases of interest,
2) report only vaginal or cervical manifestations without vulvar involvement
3) involve conditions not of interest without concurrence of autoimmune disease of interest
4) are not in English and/or were not re-published in English

Information Sources

We will search the following electronic bibliographic databases from date of inception to the present:

- MEDLINE (Ovid)
- Embase (Elsevier)
- The Cochrane Library (Wiley)

In addition, we will search grey literature sources, including:

- Web of Science

- Scopus (Elsevier)

The reference lists of all included studies and relevant review articles will be manually screened to identify additional eligible studies not captured through the initial database searches.

All database searches will be conducted prior to Title/Abstract screening. Records retrieved from each database will be exported to EndNote (Clarivate Analytics) for reference management. Duplicate records will be removed using the automated “Find Duplicates” function followed by manual verification. Deduplicated records will then be uploaded to Covidence (Veritas Health Innovation) for screening. Additional duplicates identified during the Covidence screening process will be removed prior to study selection.

The full search strategies for each database will be provided in the appendix.

Search

The search strategy will be developed and executed by a health sciences librarian (D.N.) in collaboration with the research team. A preliminary search will be conducted to identify any existing or ongoing scoping or systematic reviews on the topic.

A comprehensive search strategy will be developed for MEDLINE (Ovid) using a combination of controlled vocabulary (e.g., MeSH terms) and free-text terms related to selected autoimmune diseases listed above and anatomy related to the vulva. The MEDLINE search strategy will be iteratively refined, and then adapted for use across all additional databases described above.

No limits will be applied to language or date of publication. The full search strategies for all databases will be reported in the final manuscript in accordance with PRISMA-S guidelines.

A draft MEDLINE (Ovid) search strategy is provided below:

Ovid MEDLINE(R) ALL <1946 to May 22, 2026>

1 exp Lupus Erythematosus, Systemic/ 72895
2 exp Lupus Erythematosus, Systemic/cn [Congenital] 366
3 exp Sjogren's Syndrome/ 16194
4 exp Scleroderma, Systemic/ 24948
5 exp Dermatomyositis/ 9864
6 ("systemic lupus erythematosus" or "lupus erythematosus" or lupus or SLE or "cutaneous lupus erythematosus" or "discoid lupus erythematosus" or "subacute cutaneous lupus erythematosus" or "neonatal lupus erythematosus" or "Sjogren's syndrome" or "Sjogren syndrome" or "systemic sclerosis" or scleroderma or "diffuse scleroderma" or "progressive scleroderma" or "localized scleroderma" or morphea or dermatomyositis or polymyositis or "idiopathic inflammatory myopathy").ti,ab. 162804
7 1 or 2 or 3 or 4 or 5 or 6 177824

8 exp Vulva/ 8757
9 exp Genitalia/ 630296
10 (anogenital or genital* or genitalia or vulv* or vagin* or vulvovaginal or vulvo-vaginal or labia or clitoris or fourchette or introitus or vestibul* or perine* or perianal or groin or urethra* or mucocutaneous or genitourinary).ti,ab. 429833
11 8 or 9 or 10 969860
12 7 and 11 1873

Selection of sources of evidence

Rayyan will be used to manage the study selection process. Prior to formal screening, the review team will conduct a pilot screening of a sample of titles and abstracts to ensure consistent application of the inclusion and exclusion criteria.

In the initial screening stage, two investigators (Faith Jean and Guang Orestes) will independently assess all titles and abstracts against the predefined criteria outlined in this protocol. Where eligibility cannot be determined from the title and abstract alone, the full text will be retrieved for further evaluation.

In the second stage, the same reviewers will independently assess the full-text articles of all potentially eligible studies to determine final inclusion. Any disagreements between reviewers will be resolved through discussion; if consensus cannot be reached, the full research team will be consulted.

Reasons for exclusion at the full-text stage will be recorded, and the study selection process will be documented using the PRISMA-S flow diagram.

Data charting process

Data will be extracted independently by two reviewers using a standardized data charting form. The form will be piloted on a random sample of five studies prior to full extraction to revise the form as needed. Conflicts between reviewers will first be resolved by discussion. If a resolution cannot be reached, a third senior reviewer will adjudicate. Where data is ambiguous or not explicitly stated, it will be noted and flagged for team discussion. Given the predicted predominance of case reports and case series, quantitative analysis is not expected. Data will be charted narratively and organized thematically by disease.

Data items

Items with an asterisk will only be extracted when reported, and is not required for inclusion.

- Source characteristics
    - Author, year, country of origin
    - Study Design

    - Sample size/number of patients with vulvar involvement
    - Date of data collection
- Patient Characteristics
    - Age (mean/range)
    - Sex/gender as reported
    - Race/ethnicity as reported*
    - Autoimmune disease diagnosis and classification used
    - Disease duration at time of presentation*
    - Relevant comorbidities*
- Vulvar manifestation characteristics
    - Clinical Findings
    - Anatomic location and distribution on the vulva
    - Presenting symptoms
    - Diagnostic Testing
    - Histopathologic findings*
    - Vulvar symptoms in absence of skin lesion*
- Clinical characteristics
    - Relationship between vulvar manifestation and autoimmune disease (concurrent flare or isolated?)
    - Vulvar manifestation as presenting symptom of autoimmune disease*
    - Temporal relationship from onset/diagnosis of autoimmune condition and the vulvar manifestations
- Outcomes
    - Treatment
    - Treatment response/resolution*
    - Recurrence*

Critical Appraisal of Individual sources of evidence
Consistent with scoping review methodology, a formal critical appraisal of individual studies will not be conducted. However, key methodological characteristics (e.g., study design, sample size, and diagnostic criteria) will be charted to provide context for the interpretation of findings.

Synthesis
Given the anticipated heterogeneity in study designs and the expected predominance of case reports and case series, a formal quantitative synthesis will not be performed. In alignment with scoping review methodology as outlined by the JBI and reported according to PRISMA-ScR, findings will be synthesized descriptively.

Extracted data will be summarized using a combination of tabular and narrative approaches. Studies will be grouped by autoimmune disease (systemic lupus erythematosus, cutaneous lupus erythematosus, neonatal lupus erythematosus, Sjögren's syndrome, systemic sclerosis, and dermatomyositis) and further categorized by clinical presentation and diagnostic features. Patterns across studies, including lesion morphology, anatomic distribution, symptomatology, and relationship to systemic disease activity, will be identified and described.

Where appropriate, frequencies and proportions will be reported for key variables. No formal critical appraisal or exclusion based on study quality will be performed; instead, study characteristics will be presented to contextualize the strength and limitations of the available evidence.

References:

1. Romiti, R., Anzai, A., & Nico, M. M. (2014). Genital discoid lupus: a rare manifestation of cutaneous lupus erythematosus. *Lupus*, *23*(7), 707–710. https://doi.org/10.1177/0961203314522336
2. de Castro Coelho, F., Amaral, M., Correia, L., Nunes Campos, M. J., Paula, T., Borges, A., & Borrego, J. (2018). Lipschütz Genital Ulceration as Initial Manifestation of Primary Sjögren's Syndrome. *Case reports in obstetrics and gynecology*, *2018*, 3507484. https://doi.org/10.1155/2018/3507484
3. Dib, N., Isnard, C., Mouthon, L., & Dupin, N. (2023). Genital and Perigenital "W"-Shaped Telangiectasias in Women With Limited Cutaneous Systemic Sclerosis. *JAMA dermatology*, *159*(11), 1279–1281. https://doi.org/10.1001/jamadermatol.2023.3335