

Stevens Johnson syndrome and toxic epidermal necrolysis due to topical drugs: A systematic review of case reports

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Chee, E; Hong, E; Stewart, TJ.

**Corresponding author:**  
Thomas Stewart

thomas\_stewart@live.com

**Author Affiliation:**  
St George Dermatology and Skin  
Cancer Centre.

ADMINISTRATIVE INFORMATION

**Support** - Nil.

**Review Stage at time of this submission** - The review has not yet started.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202570052

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 July 2025 and was last updated on 12 July 2025.

INTRODUCTION

**Review question / Objective** Collate and characterise all of the available reports on Stevens Johnson syndrome and toxic epidermal necrolysis caused by topical medications/drugs.

**Rationale** Stevens Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are classically caused by systemic medications. SJS/TEN is also (more rarely) caused by topical medications and this is an under-recognised phenomenon.

**Condition being studied** Stevens Johnson syndrome and toxic epidermal necrolysis.

METHODS

**Search strategy** Search terms - Stevens Johnson syndrome OR toxic epidermal necrolysis OR Lyell syndrome OR epidermal necrolysis AND

topical drug OR topical medication OR cream OR ointment OR gel OR lotion OR suppository OR intranasal OR inhaled OR intravaginal.

**Participant or population** Patients diagnosed with Stevens Johnson syndrome or toxic epidermal necrolysis caused by a topical medication/drug.

**Intervention** N/A.

**Comparator** N/A.

**Study designs to be included** Case reports.

**Eligibility criteria** Diagnosis of Stevens Johnson syndrome or toxic epidermal necrolysis  
Culprit drug in topical formulation (not oral, intramuscular or intravenous)  
Article published in English.

**Information sources**  
Electronic databases

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PubMed  
Europe PMC  
Embase  
Scopus.

### **Main outcome(s)**

Stevens Johnson syndrome  
Toxic epidermal necrolysis.

### **Additional outcome(s)** Nil.

**Data management** After extraction, relevant data from eligible studies will be recorded in Microsoft excel. The excel file will be encrypted and kept on a password-protected laptop computer.

**Quality assessment / Risk of bias analysis** NIH risk of assessment bias.

**Strategy of data synthesis** Following full-text screening, studies will be deemed eligible/ineligible for data extraction. The cases involving SJS/TEN triggered by a topical drug/medication will be pooled and subjected to quantitative analysis. Statistical analyses will be performed with RStudio using packages meta-6.5-0 and dmetar. Meta-analyses will be performed with metaprop function and presented as a Forest plot. A Funnel plot will be constructed to create a visual representation of whether small-study effects are present. Linear regression and Egger's tests will then be used to quantitatively assess for plot asymmetry.

**Subgroup analysis** Not applicable.

**Sensitivity analysis** Not applicable.

**Language restriction** English.

**Country(ies) involved** Australia.

**Keywords** Stevens Johnson syndrome, toxic epidermal necrolysis, topical, medication, drug.

### **Dissemination plans**

Present findings at conference  
Publish manuscript in medical journal.

### **Contributions of each author**

Author 1 - Elyssa Chee - Literature review; Data extraction; Data analysis; Writing manuscript.  
Email: echee.research@gmail.com  
Author 2 - Esther Hong - Literature review; Data extraction; Data analysis; Writing manuscript.  
Email: ehon8261@gmp.usyd.edu.au  
Author 3 - Thomas Stewart -Conception; Data analysis; Writing manuscript .  
Email: thomas\_stewart@live.com