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INPLASY

Psychological complications of Stevens Johnson syndrome and toxic epidermal necrolysis

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ADMINISTRATIVE INFORMATION

Support - Nil.

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

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 23 January 2024 and was last updated on 23 January 2024.

INTRODUCTION

Review question / Objective What is the prevalence of psychological complications and quality of life impairment in adult patients with Stevens Johnson syndrome and toxic epidermal necrolysis.

Rationale Stevens Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are rare severe cutaneous adverse reactions to medications (less commonly infections) associated with mortality rates of 12%-49%1. Patients who recover from SJS and TEN often develop long-term sequelae. Survivors may experience chronic physical sequelae such as skin dyspigmentation, corneal scarring, dental disease and genitourinary symptoms, with the potential for a significant impact on their quality of life. Preliminary studies examining the psychiatric complications of SJS and TEN such as post-traumatic stress disorder (PTSD), depression, and anxiety suggest that these disorders are also very common, but they are yet to be reported systematically.

Condition being studied Stevens Johnson syndrome; Toxic epidermal necrolysis; Psychological disorders: mood disorders, anxiety disorders, posttraumatic stress disorder, psychoses; Quality of life.

METHODS

Search strategy
Electronic databases
– PubMed (January 1 1990 – September 24, 2023)

– Europe PMC (January 1 1990 – September 24, 2023)
– Scopus (January 1 1990 – September 24, 2023)
– Embase (January 1 1990 – September 24, 2023)

Terms
Stevens Johnson syndrome OR toxic epidermal necrolysis OR epidermal necrolysis OR Lyell syndrome OR severe cutaneous adverse reaction
AND
Psychological illness OR psychological disease OR psychological disorder OR psychological complication OR psychological sequelae OR psychiatric illness OR psychiatric disease OR psychiatric disorder OR psychiatric complication OR psychiatric sequelae OR mood disorder OR anxiety disorder OR posttraumatic stress disorder OR psychosis OR quality of life OR life quality impairment.

Participant or population Adults with Stevens Johnson syndrome and/or toxic epidermal necrolysis.

Intervention Nil.

Comparator Healthy age-, sex and index-year matched controls.

Study designs to be included Cohort, case-control, cross-sectional, case series.

Eligibility criteria Eligible studies were : 1) Studies reporting the results of the prevalence, with or without risk factors, of psychiatric disorders and quality of life impairment in patients with Stevens Johnson syndrome and toxic epidermal necrolysis Studies deemed not eligible were those which: 1) Included exclusively paediatric Stevens Johnson syndrome or toxic epidermal necrolysis cases (less than 18 years) or where paediatric patients were included and not able to be separated from adult cases 2) Did not delineate Stevens Johnson syndrome or toxic epidermal necrolysis from within a larger cohort of severe cutaneous adverse drug reactions (e.g. drug hypersensitivity syndrome) 3) Published in a language other than English.

Information sources
Electronic databases
– PubMed
– Embase
– Scopus
– Europe PMC.

Main outcome(s) Prevalence of psychological complications and quality of life impairment in adult patients with Stevens Johnson syndrome and toxic epidermal necrolysis.

Additional outcome(s) Risk factors for psychological complications and quality of life impairment in adult patients with Stevens Johnson syndrome and toxic epidermal necrolysis.

Data management This systematic review was conducted in accordance with the PRISMA guidelines
Appraisal and synthesis methods
Data collection will be performed independently by two authors (TJS and JF) with any disagreements regarding inclusion the of citations referred to a third author (JWF) for mediation. Information will be collected using a standardised data collection form with the principal outcomes of interest being the psychiatric complications, their prevalence and risk factors. If data from individual patients is unavailable, the aggregate data, including average change and statistical analyses of the significance of change will be collected.

Quality assessment / Risk of bias analysis Quality assessment/risk of bias will be assessed using the NIH quality assessment tool.

Strategy of data synthesis Meta-analysis
Following full-text screening, studies will be deemed eligible/ineligible for data extraction. The sample size for cases developing psychiatric conditions will be pooled and the conditions reported in more than one study subjected to quantitative analysis. Statistical analyses will be performed with RStudio 4.3.1 (RStudio: Integrated Development for R. RStudio, PBC, Boston, MA URL http://www.rstudio.com/) using packages meta 6.5-0 (Schwarzer, 2023) and dmetar (Harrer et al. 2019). Meta-analysis for prevalence will be performed with metaprop function and presented as a Forest plot. A Funnel plot will be constructed to make a visual representation assessing 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.

Other relevant information Nil

Keywords Stevens Johnson syndrome, toxic epidermal necrolysis, drug reaction, psychodermatology.

Dissemination plans Publish in a medical journal. Presentation at medical conference/s**.**

Contributions of each author

Author 1 - Thomas Stewart - Define inclusion and exclusion criteria; Develop search strategy and locate studies; Select studies; Extract data; Disseminate findings.
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Author 2 - Joshua Farrell - Define inclusion and exclusion criteria; Develop search strategy and locate studies; Select studies; Extract data; Disseminate findings.
Email: joshua.farrell1@uq.net.au
Author 3 - John Frew - Formulate the review question; Assess study quality ; Analyze and interpret results; Disseminate findings.
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