

INPLASY PROTOCOL

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None declared.

Complications of hidradenitis suppurativa after surgical management: a protocol for systematic review and meta-analysis

Wormald, JC¹; Balzano, A²; Clibbon, JJ³; Figus, A⁴; Tang, B⁵.

Review question / Objective: The purpose of this study is to provide a credible and scientific evidence for the complications of surgical treatment of hidradenitis suppurativa.

Condition being studied: Hidradenitis suppurativa (HS) is a chronic inflammatory disease that affects the apocrine glands in the axillary, groin, and breast regions, with obvious physiological and psychosocial sequelae. HS is associated with a high recurrence rate, requires extensive surgical resection, and challenging reconstruction is associated with the risk of postoperative complications. HS is relatively common, with a prevalence of 0.05% to 4.10%, but many patients receive inadequate treatment. The treatment of HS is a challenge for doctors, as its pathogenesis is unclear, the use and development of targeted therapy is hindered.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 March 2022 and was last updated on 25 April 2022 (registration number INPLASY202230168).

INTRODUCTION

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disease that affects the apocrine glands in the axillary, groin, and breast regions, with obvious physiological and psychosocial sequelae. HS is associated with a high recurrence rate, requires extensive surgical resection, and challenging reconstruction is associated with the risk of postoperative complications. HS is relatively common, with a prevalence of 0.05% to 4.10%, but many patients receive inadequate

treatment. The treatment of HS is a challenge for doctors, as its pathogenesis is unclear, the use and development of targeted therapy is hindered.

METHODS

Search strategy: These studies will be evaluated and screened by two independent reviewers. We also search all references cited in the included articles to avoid omitting other relevant articles. If the original article does not contain valid data, we will contact the author to obtain it. These studies will be screened and evaluated by two independent reviewers. Due to language restrictions, none of the studies will be excluded.

Participant or population: Patients with hidradenitis suppurativa after surgical management.

Intervention: Surgical management.

Comparator: Non-surgical management.

Study designs to be included: Randomized controlled trials.

Eligibility criteria: Patients with HS who have accepted surgical management; Research focuses on evaluating and comparing the effect of the HS operation control group. The following outcome indicators must be displayed: complications, recurrence, and length of stay(LOS) observed in both groups from baseline examination to the end of the follow-up period.

Information sources: PubMed, Medline and China National Knowledge Internet.

Main outcome(s): The purpose of this study is to provide a reliable scientific basis for the effectiveness and safety of surgical treatment of suppurative sweat gland inflammation.

Data management: Through the review of each study, data were extracted from the population, average age, gender, follow-up time, study design, publication date,

characteristics, and outcome evaluation. Two reviewers created a special data collection form for the study in Excel. The data extraction will be carried out independently, and any conflicts will be resolved before the final analysis. Any differences between the two reviewers will be discussed and the third author will be referred to arbitration if necessary. In addition, we calculated according to the guidelines of the Cochrane manual for systematic evaluation of interventions 5.1.0. If necessary, we will give up extracting incomplete data.

Quality assessment / Risk of bias analysis:

The Cochrane bias risk tool will be used independently by two reviewers to assess the bias risk of randomized cohort studies. Quality will be assessed through the following 7 items: random sequence generation, allocation concealment, blinding of outcome assessment, blinding of participants, selective reporting, incomplete outcome data, and other bias. A modified version of the downs and black tool was used to assess the quality of nonrandomized cohort studies. The revised version includes 27 items, with a possible total score of 29 points. Twenty $\geq 70\%$ for high quality, 60% to 69% for medium quality, and $\leq 60\%$ for low quality. Two researchers independently evaluated the inclusion study of 27 criteria, and any differences were resolved by a third independent reviewer. Kappa value is used to measure the degree of consistency between the two authors. The scores are as follows: fair, 0.40 to 0.59; Good, 0.60 to 0.74; Very good, 0.75 or higher.

Strategy of data synthesis: The meta-analysis used Review Manager Software (V5.3; Cochrane Collaboration). The extracted data is entered into the review manager by an independent author. Dichotomy results or continuous results of hazard ratio with 95% confidence interval or standardized mean difference with 95% confidence interval were evaluated respectively. Heterogeneity was assessed by Q-test and I² statistics. Select I² values of $< 30\%$ for low heterogeneity and $> 70\%$ for high heterogeneity. All results were

summarized on the random-effects model. $P < 0.05$ was considered statistically significant.

Subgroup analysis: Location, Closure type, Excision type.

Sensitivity analysis: There is no sensitivity analysis.

Country(ies) involved: China.

Keywords: Complication; Hidradenitis suppurativa; Surgical management.

Contributions of each author:

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Author 2 - Balzano A.

Author 3 - Clibbon JJ.

Author 4 - Figus A.

Author 5 - Bangli Tang.