

# INPLASY PROTOCOL

To cite: Su et al. Subperiosteal Drainage versus Subdural Drainage in Burr-Hole Trepanation for Chronic Subdural Hematomas A meta-analysis. Inplasy protocol 202350070. doi: 10.37766/inplasy2023.5.0070

Received: 17 May 2023

Published: 17 May 2023

**Corresponding author:**  
Gaojian Su

943362289@qq.com

**Author Affiliation:**  
Shenzhen Second People's Hospital.

**Support:** None.

**Review Stage at time of this submission:** Completed but not published.

**Conflicts of interest:**  
None declared.

## Subperiosteal Drainage versus Subdural Drainage in Burr-Hole Trepanation for Chronic Subdural Hematomas A meta-analysis

Su, CW<sup>1</sup>; Wu, CW<sup>2</sup>; Zhang, D<sup>3</sup>; Wu, JN<sup>4</sup>; Deng, YH<sup>5</sup>; Liu, GL<sup>6</sup>; Huang, XJ<sup>7</sup>.

**Review question / Objective:** Chronic subdural hematoma (CSDH) is a common neurological disorder in the elderly, and the immediate outcome of surgery of it is satisfied. However, the evidence for subperiosteal drainage (SPD) versus subdural drainage (SDD) in a chronic subdural hematoma (CSDH) remains controversial. We aim to assess the latest evidence on the use of SPD compared to SDD in patients with CSDH undergoing burr hole evacuation. P: Patients with chronic subdural hematoma. I: subperiosteal drain. C: subdural drain. O: therapeutic effect. S: RCT.

**Condition being studied:** We aim to assess the latest evidence on the use of SPD compared to SDD in patients with CSDH undergoing burr hole evacuation.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 May 2023 and was last updated on 17 May 2023 (registration number INPLASY202350070).

### INTRODUCTION

**Review question / Objective:** Chronic subdural hematoma (CSDH) is a common neurological disorder in the elderly, and the immediate outcome of surgery of it is satisfied. However, the evidence for subperiosteal drainage (SPD) versus subdural drainage (SDD) in a chronic subdural hematoma (CSDH) remains

controversial. We aim to assess the latest evidence on the use of SPD compared to SDD in patients with CSDH undergoing burr hole evacuation. P: Patients with chronic subdural hematoma. I: subperiosteal drain. C: subdural drain. O: therapeutic effect. S: RCT.

**Condition being studied:** We aim to assess the latest evidence on the use of SPD

---

compared to SDD in patients with CSDH undergoing burr hole evacuation.

## METHODS

**Participant or population:** CSDH patients.

**Intervention:** Subperiosteal drain.

**Comparator:** Subdural drain.

**Study designs to be included:** RCT.

**Eligibility criteria:** Our criteria for inclusion in the meta-analysis were as follows: the diagnosis of CSDH which was confirmed by computed tomography (CT) scans and/or magnetic resonance (MR) images before surgery; CSDH patients who underwent SPD or SDD; comparative studies that reported one or more clinical outcomes of interest; comparative patients (neither younger nor older); RCT. The exclusion criteria were as follows: system review or case report, only an abstract available, studies reporting irrelevant outcomes, and not written in English.

**Information sources:** PubMed, Web of Science, Embase, and Cochrane.

**Main outcome(s):** Recurrence rates, gender, postoperative mortality, seizures, favorable outcome (mRS score 0–3), and use of antithrombotic agent

**Quality assessment / Risk of bias analysis:** Cochrane tool.

**Strategy of data synthesis:** Statistical analyses for dichotomous variables were performed using odds ratios (ORs) as the summary statistic. Statistical significance was set at  $P < 0.05$  or a 95% confidence interval (CI) of odds ratios not including 1. Effect sizes are expressed as (pooled) odds ratio estimates. We interpreted the pooled data to be heterogeneous if the probability value of the  $\chi^2$  test was  $< 0.10$ .

**Subgroup analysis:** Subgroup study based on patients' age, marital status and so on.

**Sensitivity analysis:** After deleting any one of them, the combined results of the other

literatures were little different from those without deletion, which means that the sensitivity analysis was passed.

**Country(ies) involved:** China.

**Keywords:** chronic subdural hematoma, meta-analysis, subperiosteal, subdural, drainage, burr hole.

**Contributions of each author:**

Author 1 - Gaojian Su.

Author 2 - Chuwei Wu.

Author 3 - Di Zhang.

Author 4 - Jianuo Wu.

Author 5 - Yuhang Deng.

Author 6 - Gaolin Liu.

Author 7 - Xianjian Huang.