

Efficacy Of Neuroendoscopy Versus Open Craniotomy In The Management Of Spontaneous Intracerebral Haemorrhage (Sich): A Systematic Of Randomised Trials

Muhammad Reza Arifianto¹, Syauq Hikmi¹, Agus Turchan¹, Eko Agus Subagio¹, Asra Al Fauzi¹, Nur Setiawan Suroto¹

¹Neurosurgery/ Dr. Soetomo General Hospital/ Indonesia

Purpose

Spontaneous intracerebral hemorrhage (SICH) is an emergency case related to high morbidity, high mortality and high disability which need prompt neurosurgical intervention. Accounting more than 70% of all stroke patients end up with death with more than 80% associate with disability-adjusted life-years (DALYs) lost. Neuroendoscopy is one of several methods in neurosurgery field which recently emerge as a promising method. Compared from conventional craniotomy method, neuroendoscopy offers several advantages in certain conditions.

Materials and Methods

We performed this review based on the Preferred Reporting Items for Systematic review and Meta-Analysis. We searched on PubMed, EMBASE, and Cochrane Central Register of Controlled Trials to identify relevant studies. The subgroup analyses were stratified by clinical outcomes, evacuation rates, complications, operation time, and hospital stay for patients who underwent neuroendoscopic surgery or conventional craniotomy.

Results

More than 800 abstracts of articles were reviewed after the topic search (“Endoscopic surgery OR neuroendoscopic surgery” and “Intracerebral hemorrhage OR intracranial haemorrhage OR intracerebral hematoma OR intracranial haematoma”), also adding similar article or related articles, and manual search of cross references from full text article). A total of 4 RCT articles were included in this study after detailed study of 32 relevant articles.

Conclusion

From this study, we conclude that the neuroendoscopy is a safe technique which provide better outcome, better evacuation rate, faster in operating time, fewer blood lost and shorter hospital stay than conventional craniotomy technique. However, further evidences are warranted to confirm this findings.