

Supplemental Digital Content 1.

Tables and search strategy

Article title: Comparative Outcomes of Coil Embolization and Surgical Clipping in Elderly Patients with Subarachnoid Hemorrhage: A Systematic Review and Meta-Analysis

Journal name: Neurosurgical Review

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1. Search strategy

"subarachnoid hemorrhage" AND (coiling OR endovascular OR embolization) AND clipping AND (older OR elder OR elderly OR >65 OR "> 65" OR >60 OR "> 60" OR "> 70" OR >70 OR >75 OR ">75" OR "> 80" OR >80 OR >85 OR "> 85" OR old)

2. **Table S2:** Risk of Bias (Rob) 2 tool for randomized clinical trials comparing clipping versus coiling in the elderly population

Study	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Rating
Molyneux et al. (2005)	Some concerns	Some concerns	Low risk	Some concerns	Low risk	Some concerns
Proust et al. (2018)	Some concerns	Low risk	Low risk	Some concerns	Low risk	Some concerns
Domains. 1: Risk of bias arising from the randomization process. 2: Risk of bias due to deviations from the intended interventions. 3: Missing outcome data. 4: Risk of bias in measurement of the outcome. 5: Risk of bias in selection of the reported result.						

3. Table S3: Risk of bias assessment for cohort studies comparing clipping versus coiling in the elderly population – Newcastle Ottawa Scale (NOS)

Study	Selection			Comparability		Outcome/Exposure		Rating
	Representativeness of the exposed cohort	Ascertainment of exposure	Outcome of interest not present at start of study	Controls for variable clinical elements of aSAH	Controls for other factors (e.g., sex, age)	Ascertainment of exposure	Adequacy of follow up	
Asano et al. (2007)	Yes	Yes	No	No	No	Yes	Yes	Moderate *
Bekelis et al. (2015)	No	Yes	No	No	No	Yes	Yes	Moderate *
Braun et al. (2005)	Yes	Yes	No	No	No	Yes	Yes	Moderate *

Catapano et al. (2021)	Yes	Yes	No	No	Yes	Yes	Yes	Low*
Dasenbrock et al. (2019)	Yes	Yes	No	No	No	Yes	Yes	Moderate*
Groden et al. (2000)	Yes	Yes	No	No	No	Yes	Yes	Moderate*
Groden et al. (2001)	No	Yes	No	No	Yes	Yes	Yes	Low*
Hironaka et al. (2020)	Yes	Yes	No	No	No	Yes	No	Moderate*
Hovorka et al. (2023)	Yes	Yes	No	No	No	Yes	Yes	Moderate*
Karamanakos et al. (2010)	Yes	Yes	No	No	Yes	Yes	No	Moderate*
Kutsuna et al. (2017)	No	Yes	No	No	Yes	Yes	Yes	Moderate*

Lee et al. (2024)	Yes	Yes	No	No	No	Yes	Yes	Moderate *
Maeda et al. (2020)	Yes	Yes	No	No	No	Yes	No	Moderate *
Nieuwkamp et al. (2006)	Yes	Yes	No	No	Yes	Yes	Yes	Low*
Park et al. (2014)	Yes	Yes	No	No	No	Yes	No	Moderate *
Park (critical age) et al. (2018)	No	Yes	No	No	Yes	Yes	Yes	Moderate *
Proust et al. (2010)	Yes	Yes	No	No	No	Yes	Yes	Moderate *
Proust et al. (2019)	Yes	Yes	No	No	No	Yes	Yes	Moderate *
Scholle et al. (2012)	Yes	Yes	No	No	No	Yes	Yes	Low*

Shirao et al. (2012)	Yes	Yes	No	No	Yes	Yes	No	Moderate *
Tenjin et al. (2011)	No	Yes	No	No	No	Yes	Yes	Moderate *
Wang et al. (2017)	Yes	Yes	No	No	No	Yes	Yes	Moderate *
Yoshikawa et al. (2020)	Yes	Yes	No	No	No	Yes	Yes	Moderate *
Zheng et al. (2018)	Yes	Yes	No	No	No	Yes	No	Moderate *
aSAH: aneurysmal Subarachnoid Hemorrhage								

4. **Table S4.** GRADE strategy for assessing certainty of evidence

Question: Coil embolization compared to surgical clipping for Unfavorable outcome

Setting: What are the comparative effectiveness of coil embolization versus surgical clipping for elderly patients with aneurysmal subarachnoid hemorrhage (aSAH)?

Bibliography:

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	coil embolization	surgical clipping	Relative (95% CI)	Absolute (95% CI)		

Unfavorable outcome

25	non-randomised studies	serious ^a	serious ^b	not serious	not serious	all plausible residual confounding would reduce the demonstrated effect	19263/495 40 (38.9%)	30277/495 40 (61.1%)	RR 1.03 (0.96 to 1.11)	18 more per 1.000 (from 24 fewer to 67 more)	⊕○○○ ○ Very low ^{a,b}	IMPORTANT
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CI: confidence interval; **RR:** risk ratio

Explanations

a. Most included studies had a Moderate risk of bias

b. High Heterogeneity