

CORRESPONDENCE

Re: “Systematic Review and Meta-Analysis of Very Urgent Carotid Intervention for Symptomatic Carotid Disease”

Milgrom et al.¹ recently performed a systematic review that discussed the timing of symptomatic carotid interventions. It is encouraging to see many authors trying to answer this question. Although these interventions are commendable for stroke patients, there are necessary comments that need to be made in terms of this review.

The published article has incomplete reporting of the search strategy. Therefore, it is very difficult to know if the search was conducted poorly or just reported poorly. In searching literature databases, a search strategy typically uses the terms and their synonyms for each of the components of the PICO model that are related to elements in the research question. A librarian or search specialist to design and conduct the literature search is recommended to improve search quality.

The systematic review's aim is to assess the quality of included articles and heterogeneity, to disclose the risk of bias and conclude the level of evidence. The concluded level of evidence in a systematic review is an important source of both future research and clinical recommendations. Moreover, systematic reviews have to provide the effectiveness of interventions with the quality (level) of evidence of included studies.² Thus, to determine the level of evidence, we believe that adapting the Grading of Recommendations Assessment, Development and Evaluation approach is highly recommended and efficient.

REFERENCES

- 1 Milgrom D, Hajibandeh S, Hajibandeh S, Antoniou SA, Torella F, Antoniou GAA. Systematic review and meta-analysis of very urgent carotid intervention for symptomatic carotid disease. *Eur J Vasc Endovasc Surg* 2018;56:622–31.
- 2 Moher D, Liberati A, Tetzlaff J, Altman DG, PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Med* 2009;21:b2535.

Vladimir T. de Vasconcelos*

Department of Vascular Surgery, Federal University of São Paulo, São Paulo, Brazil

*Department of Vascular Surgery, Federal University of São Paulo, Rua Borges Lagoa, 754, São Paulo, SP 04038-001, Brazil.

Email-address: vtvascon@hotmail.com

© 2018 European Society for Vascular Surgery. Published by Elsevier B.V. All rights reserved.

<https://doi.org/10.1016/j.ejvs.2018.10.033>

DOI of original article: <https://doi.org/10.1016/j.ejvs.2018.07.015>

The GRADE Approach to Evaluating the Evidence on Very Urgent Intervention for Symptomatic Carotid Disease

Our evidence synthesis research group conducted a systematic review and meta-analysis of outcomes of very urgent (<48 h) vs. urgent (≥48 h) carotid intervention for symptomatic carotid disease.¹ A prespecified search strategy was set and a thorough search was conducted of several bibliographic health and care sources using broad subject headings and keywords to capture relevant reports. Meta-analysis of 12 observational studies and one randomised controlled trial reporting a total of 5751 carotid interventions found that very urgent intervention was associated with increased risk of peri-operative stroke compared with urgent intervention, but there was no significant difference in mortality, transient ischaemic attack, or myocardial infarction.

Systematic reviews of the effects of health care provide essential information for making well informed decisions. Explicit judgements about the quality of evidence help healthcare professionals and policy makers draw conclusions and guide subsequent decisions. The certainty of evidence reflects the extent to which we are confident that an estimate of the effect is correct. The Grades of Recommendation, Assessment, Development and Evaluation Working Group (GRADE Working Group) has developed a system for grading the quality of the body of evidence, which has been adopted by several organisations. This system was applied in our review considering the within-study risk of bias, directness of evidence, inconsistency, precision of effect estimates, and risk of publication bias, using an online tool (<https://gdt.gradeapro.org/app/>) (Table 1). For critical outcomes (stroke and death), the grade of evidence was found to be low (further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate) or very low (any estimate of effect is very uncertain). Such an

Table 1. Summary of findings and GRADE assessment on outcomes of very urgent (<48h) vs. urgent (≥48h) carotid intervention for symptomatic carotid disease

Outcome	Certainty assessment							No of patients, n (%)		Effect		Certainty	Importance
	No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Very urgent	Urgent carotid intervention	Relative (95% CI)	Absolute (95% CI)		
Stroke	13	1 RCT and 12 observational studies	Serious ^a	Not serious	Not serious	Not serious	Strong association	50/762 (6.6)	162/4989 (3.2)	OR 2.19 (1.46 – 3.26)	36 more per 1,000 (from 14 more to 66 more)	⊕⊕○○	Critical Low
Death	12	1 RCT and 11 observational studies	Serious ^b	Not serious	Not serious	Serious ^c	None	12/742 (1.6)	59/4844 (1.2)	OR 1.55 (0.81 – 2.96)	7 more per 1,000 (from 2 fewer to 23 more)	⊕○○○	Critical Very low
TIA	5	1 RCT and 4 observational studies	Serious ^d	Not serious	Not serious	Serious ^c	Publication bias strongly suspected ^e	8/273 (2.9)	17/815 (2.1)	OR 1.33 (0.55 – 3.19)	7 more per 1,000 (from 9 fewer to 43 more)	⊕○○○	Important Very low
MI	4	Observational studies	Serious ^f	Not serious	Not serious	Serious ^c	Publication bias strongly suspected ^e	4/157 (2.5)	15/755 (2.0)	OR 1.33 (0.41 – 4.33)	6 more per 1,000 (from 12 fewer to 61 more)	⊕○○○	Important Very low

CI = confidence interval; MI = myocardial infarction; OR = odds ratio; TIA = transient ischaemic attack; RCT = randomised controlled trial.

^a Mixture of 1 RCT and 12 observational studies. The RCT was judged to be high risk of performance and detection bias (lack of blinding). The methodological quality of 6 of the observational studies was moderate because of lack of comparability of cohorts.

^b Mixture of 1 RCT and 11 observational studies. The RCT was judged to be high risk of performance and detection bias (lack of blinding). The methodological quality of 6 of the observational studies was moderate because of lack of comparability of cohorts.

^c Studies included few participants and few events and thus have wide confidence intervals.

^d Mixture of 1 RCT and 4 observational studies. The RCT was judged to be high risk of performance and detection bias (lack of blinding). The methodological quality of all 4 observational studies was moderate or low because of lack of comparability of cohorts.

^e A large number of studies included in the review do not contribute to this outcome.

^f Only observational studies contributed to this outcome, half of which were judged to be of low methodological quality because of lack of comparability of cohorts.

assessment underlines the need for sufficient randomised clinical data before a recommendation can be made as to the safety and relative benefits of very urgent intervention in symptomatic carotid disease.

Oldham OL1 2JH, UK.

Email-address: antoniou.ga@hotmail.com (George A. Antoniou)

REFERENCE

- Milgrom D, Hajibandeh S, Hajibandeh S, Antoniou SA, Torella F, Antoniou GA. Systematic review and meta-analysis of very urgent carotid intervention for symptomatic carotid disease. *Eur J Vasc Endovasc Surg* 2018;56:622–31.

George A. Antoniou*

Department of Vascular and Endovascular Surgery,
The Royal Oldham Hospital, Pennine Acute Hospitals NHS
Trust, Manchester, UK
Division of Cardiovascular Sciences,
School of Medical Sciences, University of Manchester,
Manchester, UK

Stavros A. Antoniou
European University Cyprus, Nicosia,
Cyprus

Francesco Torella
Liverpool Vascular and Endovascular Service,
Royal Liverpool University Hospital, Liverpool, UK

*Corresponding author. Surgical Offices, Phase 1,
The Royal Oldham Hospital, Rochdale Road,

© 2018 European Society for Vascular Surgery. Published by Elsevier B.V. All rights reserved.

<https://doi.org/10.1016/j.ejvs.2018.10.037>
DOI of original article: <https://doi.org/10.1016/j.ejvs.2018.10.033>

Importance of Surgeon Experience in the Relationship Between Abdominal Aortic Aneurysm Surgery Volume and Peri-operative Mortality

Sawang et al.'s finding of a non-significant association between endovascular aneurysm repair (EVAR) volume and peri-operative mortality is in contrast to previous epidemiological studies.^{1,2}

This may be explained by surgeon experience. Given the rapid adoption of EVAR and the key developmental contributions that Australia made,¹ the younger generation of surgeons may have undergone more EVAR training and have gained less experience in open repair. It is also of paramount importance to consider the phases of the learning curve/