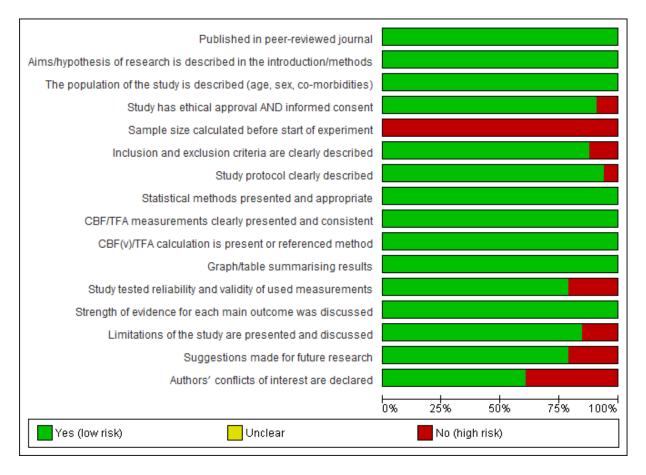
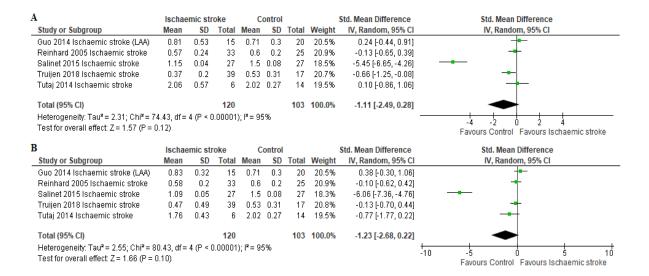
Supplementary Figures



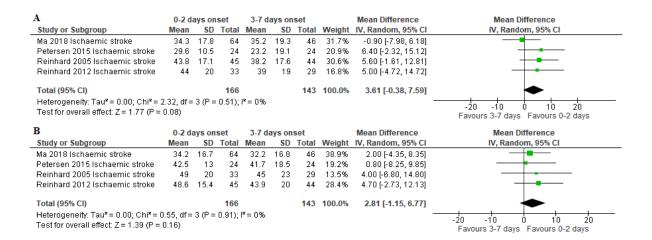
Supplementary Figure I: authors' evaluation about each risk of bias item presented as percentages across all included studies for each of the Downs and Black criteria.

| Xiong 2017 | Wang 2015 | Tutaj 2014 | Truijen 2018 | Salinet 2015 | Salinet 2014 | Saeed 2013 | Reinhard 2012 | Reinhard 2008 | Reinhard 2005 | Petersen 2015 | Otite 2014 | Oeinck 2013 | Nakagawa 2011 | Muller 2019 | Ma 2018 | Ma 2017 | Ma 2016 | Llwyd 2018 | Lang 2001 | Kwan 2004 | lmmink 2005 | Guo 2015 | Guo 2014 | Gong 2013 | Gommer 2008 | Fritzsch 2010 | Diehl 1995 | Chi 2018 | Chen 2014 | Castro 2017(b) | Castro 2017(a) | Atkin 2010 | |
|------------|-----------|------------|--------------|--------------|--------------|------------|---------------|---------------|---------------|---------------|------------|-------------|---------------|-------------|---------|---------|---------|------------|-----------|-----------|-------------|----------|----------|-----------|-------------|---------------|------------|----------|-----------|----------------|----------------|------------|---|
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | Published in peer-reviewed journal |
| • | • | • | • | • | • | • | Ā | Ā | • | • | • | • | • | • | | | • | • | • | • | • | • | | • | • | • | • | • | | • | • | • | Aims/hypothesis of research is described in the introduction/methods |
| | _ | • | | - | • | _ | - | - | _ | - | | | | • | | | | • | | | | | | | • | | | | | | | • | The population of the study is described (age, sex, co-morbidities) |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | _ | • | • | • | - The population of the study is described (age, sex, co-morbidities) |
| • | • | • | • | • | • | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | • | | • | • | • | Study has ethical approval AND informed consent |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | Sample size calculated before start of experiment |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | Inclusion and exclusion criteria are clearly described |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | Study protocol clearly described |
| _ | • | • | | • | • | _ | _ | _ | _ | | | | | • | | | | • | | | | | | | • | | | | | | | • | Statistical methods presented and appropriate |
| • | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | - | _ | - | _ | - | - | _ | _ | _ | _ | _ | _ | - | _ | _ | _ | _ | _ | | - | - | - | - |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | • | • | • | CBF/TFA measurements clearly presented and consistent |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | • | • | • | CBF(v)/TFA calculation is present or referenced method |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | Graph/table summarising results |
| • | • | • | • | • | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | Study tested reliability and validity of used measurements |
| | | | | _ | | _ | | | • | | | • | | | | | | • | | | | | | | • | | | | | | | | Strength of evidence for each main outcome was discussed |
| • | • | • | • | • | • | • | • | • | • | • | • | _ | • | _ | • | _ | • | _ | • | • | • | • | • | • | • | - | - | _ | - | - | • | - | - |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | • | • | • | • | • | | • | | • | • | • | Limitations of the study are presented and discussed |
| • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | Suggestions made for future research |
| | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | 0 | 0 | • | | • | • | • | Authors' conflicts of interest are declared |

Supplementary Figure II: review authors' evaluation about each risk of bias item for each included study of low risk of bias (green), and high risk of bias (red).



Supplementary Figure III. A: Forest plot of gain for a sub-group of large vessel disease (affected side) in five studies of AIS. Heterogeneity is high and significant ($I^2 = 95\%$, P < 0.00001). B: Gain for a sub-group of five studies in large vessel disease (unaffected side). Heterogeneity is high and also significant ($I^2 = 95\%$, P < 0.00001).



Supplementary Figure IV. A: Forest plot of phase for serial measurement in the affected side of AIS. Heterogeneity is low and non-significant ($I^2 = 0\%$, P = 0.51). B: Phase for serial measurement of four studies of AIS in the unaffected side. Heterogeneity is low and also non-significant ($I^2 = 0\%$, P = 0.91).