

Hindman BJ, Dexter F: Anesthetic Management of Emergency Endovascular Thrombectomy for Acute Ischemic Stroke.
Part 2: Integrating and Applying Observational Reports and Randomized Clinical Trials

SUPPLEMENTAL DIGITAL CONTENT-1

OBSERVATIONAL REPORTS COMPARING SEDATION AND GENERAL ANESTHESIA FOR ENDOVASCULAR THROMBECTOMY:

Table S1-1. Observational Reports Comparing Sedation and General Anesthesia for EVT: Study Dates, Outcomes Reported, and Bias Against Patients Selected to Receive General Anesthesia

| Observational Report, Reference | Study Dates | Patients Studied Prior to 2014 SNACC Guidelines, % ^a | Outcomes Reported | | | | Bias Against General Anesthesia Patients | | | | | | |
|--|-----------------|---|-------------------|-----------|----------|---------------|--|---|---|---|---|--|---|
| | | | Neurologic | Mortality | Workflow | Complications | Greater NIHSS in GA Group; P Value | Greater Intracranial ICA Occlusion in GA Group; P Value | Greater Posterior Circulation Stroke in GA Group; P Value | Patients Intubated Prior To EVT Exclusive in GA group | Patients Who Failed Sedation Included in GA Group | Sedation and GA Groups Contemporaneous | Other Risk Factors Greater in GA Group ^b |
| Nichols et al., 2010 ¹ | Jan2003-Feb2006 | 100 | Yes | Yes | Yes | Yes | Yes; P=0.03 | Yes; P=0.0469 | No | Yes ^c | Yes ^c | Yes | No |
| Sugg et al., 2010 ^{d 2} | Jun2007-Jun2009 | 100 | Yes | Yes | Yes | Yes | Yes; P<0.001 | No | No | Yes | No | Yes | Yes |
| Abou-Chebl et al., 2010 ^{d 3} | 2005-2009 | 100 | Yes | Yes | Yes | Yes | Yes; P=0.01 | Yes; P=0.01 | No | Yes ^c | Yes ^c | Yes | No |
| Jumaa et al., 2010 ⁴ | Jan2006-Jul2009 | 100 | Yes | Yes | Yes | Yes | Yes; P=0.004 | No | No | No | No | No | Yes |
| Davis et al., 2012 ⁵ | Jan2003-Sep2009 | 100 | Yes | Yes | Yes | Yes | Yes; P=0.03 | No | Yes; P=0.08 | Yes ^c | Yes ^c | Yes | Yes |
| Hassan et al., 2012 ⁶ | Dec2006-Jul2010 | 100 | Yes | Yes | Yes | Yes | Yes; P=0.0001 | Can't determine | Can't determine | Yes ^c | Yes ^c | Yes | Yes |
| Langer et al., 2013 ⁷ | Jul2005-Jul2010 | 100 | No | Yes | Yes | Yes | Can't determine | No | Yes; P=0.0001 | Can't determine | Yes | Yes | Can't determine |
| Li et al., 2014 ⁸ | Dec2006-Oct2012 | 100 | Yes | Yes | Yes | Yes | Yes; P=0.059 | No | Yes; P=0.0118 | No | Can't determine | No | No |
| John et al., 2014 ⁹ | Jan2008-Dec2012 | 100 | Yes | Yes | Yes | Yes | No | Yes; P=0.043 | No | Yes ^c | No | No | No |
| Whalin et al., 2014 ¹⁰ | Sep2010-Jul2012 | 100 | Yes | Yes | Yes | Yes | Yes; P=0.009 | No | No | Yes | No | Yes | Yes |
| Abou-Chebl et al., 2014 ¹¹ | Mar2012-Feb2013 | 100 | Yes | Yes | Yes | Yes | Yes; P=0.002 | No | No | Yes | Yes ^c | Yes | No |
| Abou-Chebl et al., 2015 ¹² | Aug2006-Apr2012 | 100 | Yes | Yes | Yes | Yes | Yes; P<0.0001 | Yes; P=0.06 | No | Yes | Yes ^c | Yes | Yes |
| McDonald et al., 2015 ¹³ | Jan2006-Mar2013 | 100 | No | Yes | No | Yes | Can't determine | Can't determine | Can't determine | Yes ^c | Yes ^c | Yes | Can't determine |

| | | | | | | | | | | | | | |
|--|-----------------|-----|-----|-----|-----|-----|-----------------|-----------------|----------------------------|------------------|------------------|-----------------|-----------------|
| van den Berg et al., 2015 ¹⁴ | Oct2002-Mar2013 | 100 | Yes | Yes | Yes | Yes | No | No | No | Yes | No | Yes | Yes |
| Mundiyanapurath et al., 2015 ¹⁵ | Nov2013-Mar2014 | 100 | No | No | Yes | No | Yes; P=0.07 | Can't determine | No | Can't determine | No | Yes | Yes |
| Sivasankar et al., 2016 ¹⁶ | Jan2010-Mar2015 | 81 | Yes | No | No | No | Can't determine | Can't determine | No | Can't determine | No | Yes | Can't determine |
| Just et al., 2016 ¹⁷ | Nov2000-Mar2013 | 100 | Yes | Yes | Yes | No | No | Can't determine | Yes; P=0.0009 ^e | Can't determine | No | Can't determine | No |
| Janssen et al., 2016 ¹⁸ | May2012-Mar2014 | 100 | No | No | Yes | Yes | No | Can't determine | No | No | No | Yes | Yes |
| Berkhemer et al., 2016 ^{f 19} | Dec2010-Mar2014 | 100 | Yes | Yes | Yes | Yes | No | No | No | Can't determine | No | Yes | No |
| Bracard et al., 2016 ^{f 20} | Jun2010-Feb2015 | 81 | Yes | No | Yes | No | Can't determine | Can't determine | Can't determine | Can't determine | Can't determine | Can't determine | Can't determine |
| Jagani et al., 2016 ²¹ | Dec2008-Mar2015 | 84 | Yes | Yes | No | Yes | No | No | Yes; P<0.0001 | Yes | No | No | Yes |
| Bekelis et al., 2017 ²² | Jan2009-Dec2013 | 100 | No | Yes | No | Yes | Can't determine | Can't determine | Can't determine | Yes ^c | Yes ^c | Can't determine | Can't determine |
| Slezak et al., 2017 ²³ | Jan2010-Apr2015 | 80 | Yes | Yes | Yes | Yes | Yes; P<0.001 | Yes; P<0.001 | No | Can't determine | No | Yes | Yes |
| Campbell et al., 2018 ^{f 24} | Aug2010-Apr2015 | 84 | Yes | Yes | Yes | Yes | No | No | No | Can't determine | Can't determine | Yes | Yes |

Abbreviations: EVT, endovascular thrombectomy; GA, general anesthesia; ICA, internal carotid artery; NIHSS, National Institutes of Health Stroke Scale; SNACC, Society for Neuroscience in Anesthesiology and Critical Care. Unless otherwise specified, P values are those reported in the original publications. Underlined P values were calculated by the authors of this review using data from the original publications using Fisher's exact test.

- The percentage of all patients studied prior to the publication of 2014 SNACC guidelines was estimated assuming a constant rate of patient accrual during the interval bounded by the study dates.
- Other risk factors for unfavorable outcome that were greater in the GA group are available upon request.
- Not formally stated, but inferred on the basis of reported methods.
- Sixty-four of 66 patients reported in Sugg et al., 2010² were reported in Abou-Chebl et al., 2010.³
- Data provided by Dr. Caroline Just, Department of Clinical Neurological Science, Western University, London, Ontario, Canada; personal communication, March 27, 2018. Posterior circulation strokes: sedation: 8/67 (12%) vs. general anesthesia 17/42 (40%). Fisher's exact P=0.0009, calculated by the authors of this review.
- All patients reported in Berkhemer et al., 2016¹⁹ and Bracard et al., 2016²⁰ are included in Campbell et al., 2018.²⁴

Supplemental Digital Content-1, References

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