Supplemental material

BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s)

J NeuroIntervent Surg

SUPPLEMENTARY MATERIAL

Supplementary Table. Demographics of patients with ICAD treated exclusively with the Tigertriever device.

Number n=25	
Age μ ± SD	60 ± 17.5
Male gender n (%)	14 (56)
Race, n (%)	
White	23 (92)
NIHSS score baseline μ ± SD	17 ± 5
Baseline CT ASPECTS μ ± SD	8 ± 1
Previous MI/CAD	5 (20)
Previous AIS/TIA	5 (20)
Intravenous tPA	16 (64)
Proximal occlusion location n (%)	
MCA (M1)	15 (60)
MCA (M2)	6 (24)
ICA	3 (12)
Basilar	1 (4)

MI: Myocardial infarction; CAD: Coronary artery disease; AIS: Acute ischemic stroke; TIA: Transient ischemic attack; MCA: Middle cerebral artery; ICA: Internal cerebral artery.

Supplemental material

BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s)

J NeuroIntervent Surg

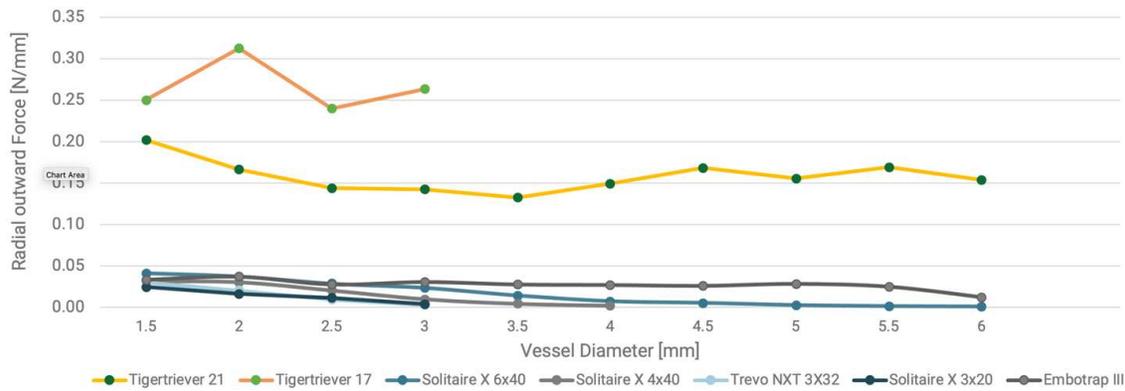33
34 **Supplemental Figures.**
35
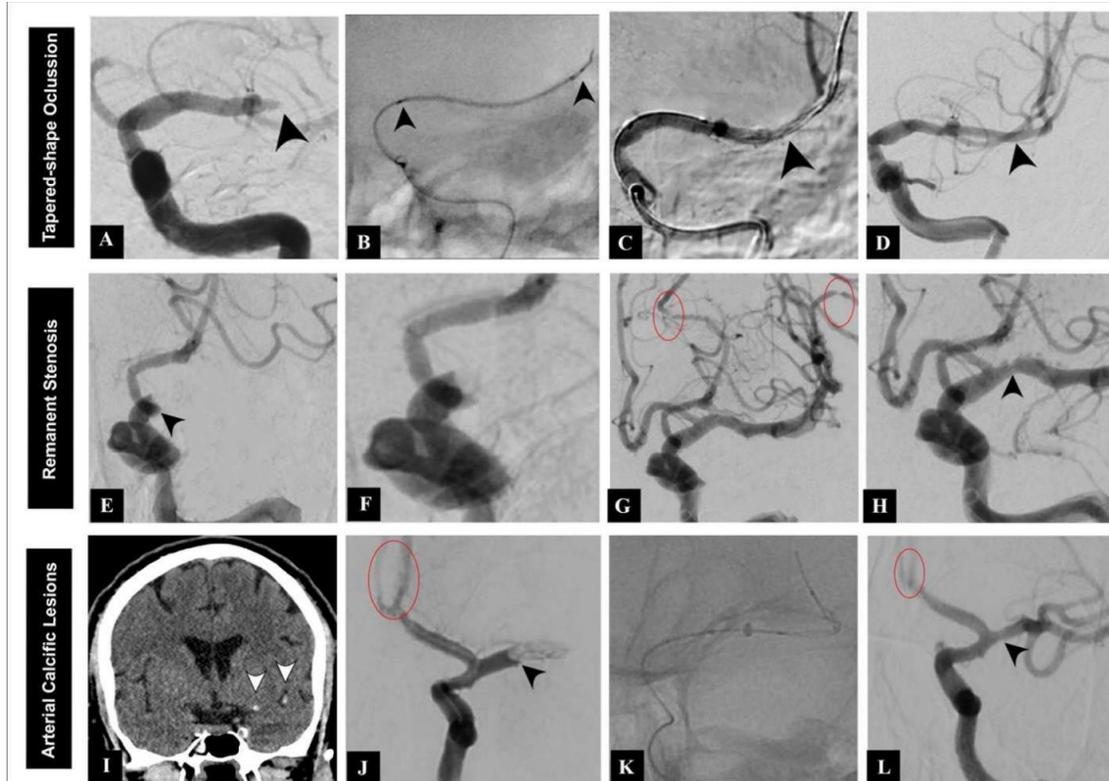
36
37 **Figure 1. Criteria for the diagnosis of intracranial atherosclerotic disease (ICAD).**
38 **(A-D)** Example of a tapered occlusion. **(A)** Middle cerebral artery (MCA) M1 portion with
39 tapered occlusion (arrowhead panel A). **(B-C)** The Tigertriever is navigated to the
40 occluded MCA, and then unsheathed (B, arrowheads show the proximal and distal
41 markers of the device. C, arrowhead shows constriction of the device at the site of the
42 occlusion). Complete recanalization (TICI 3) after thrombectomy with Tigertriever device
43 (arrowhead panel D). **(E-H)** MCA occlusion with remanent stenosis after thrombectomy
44 (H, arrowhead), suggestive of atherosclerotic disease. **(G)** Several other arterial
45 segments with segmental narrowing suggestive of ICAD are visualized (G, red cycles).
46 **(I-L)** Non-contrast computed tomography (NCCT) shows arterial calcific lesions (I, white
47 arrows) in the same location of the occlusion. Other areas of arterial narrowing
48 suggestive of ICAD can be seen in the anterior communicating arteries (J, red circle). A
49 clot can be seen in the DSA (J, arrowhead), at the same location where there is a
50 hyperdense lesion in the coronal view of the NCCT (I, arrowhead). **(K)** The Tigertriever
51 is deployed and mechanical thrombectomy is performed with support of an intermediate
52 catheter. **(L)** Complete recanalization is achieved (arrowhead panel L).
53
54
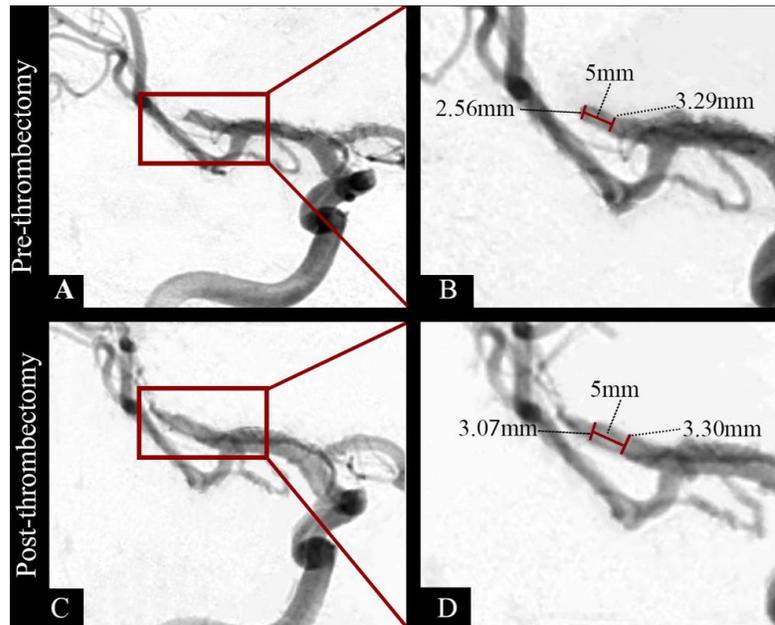
Figure 2. Intraluminal measurements: (A) M2 occlusion of the right middle cerebral artery (MCA). **(B)** Pre- thrombectomy vessel diameter at the proximal vessel and at the site of occlusion. For consistency, the transverse diameter of the proximal artery was always measured 5 mm from the occlusion site. **(C)** Complete revascularization is achieved after mechanical thrombectomy with the Tigertriever device. **(D)** Post-thrombectomy measurements at the level where the occlusion occurred displayed increased vessel caliber (3.07 mm vs 2.56 mm), without significant change in the proximal arterial segment (3.30 vs 3.29 mm). The distance between the measurement of the proximal vessel and the occlusion site (5 mm) remains constant in the pre- and post-thrombectomy measurements.

84

85
86
87
88 **Figure 3**. **Comparison of the radial force of different stentrievers.** In vitro
89 comparison of the radial force exerted by the Tigertrievers 21 and 17 with other
90 commercially available stent retrievers. The Tigertriever device has a consistently
91 higher radial force across various vessel diameters.

92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
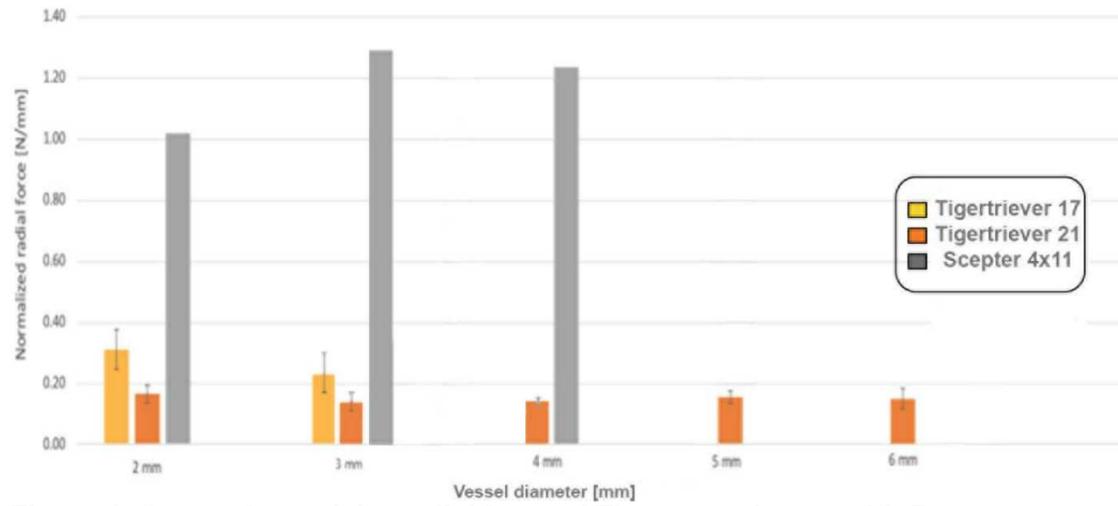
120
121 **Figure 4. Comparison of the radial force of Tiger stentrievers with Percutaneous**
122 **transluminal angioplasty (PTA) balloons.** In vitro comparison of the radial force
123 exerted by the Tigertrievers 17 and 21 with PTA balloons in different vessel diameters.
124 The radial force of PTA balloons is constantly higher