

1 **EJVES1865R\_REV2\_SUPPLEMENTARY MATERIAL (SECOND REVISION)**

2

3

4

5 **Supplementary Table S1: Full search strategy**

PubMed	Scopus	Cochrane Library	6
	(Endovascular repair	( Endovascular repair OR	7
(((((((endovascular	OR Endovascular	Endovascular treatment*) :ti,ab,kw	8
repair[Title/Abstract]) OR	treatment*) AND	AND ( fenestrated endograft* OR	9
(endovascular	(fenestrated	branched endograft*):ti,ab,kw AND	10
treatment[Title/Abstract])) OR	endograft* OR	(aortic arch OR arch of the aorta OR	11
(total endovascular repair)) OR	branched endograft*)	arch aneurysm* OR aortic arch	12
(fenestrated endograft)) OR	AND (aortic arch OR	syndrome*): ti,ab,kw	13
(branched endograft)) OR (inner	arch of the aorta OR		14
branch)) OR (chimney)) AND	arch aneurysm* OR		15
(((aortic arch[Title/Abstract]) OR	aortic arch		16
(arch of the aorta[Title/Abstract]))	syndrome*)		17
OR (arch			18
aneurysm[Title/Abstract])) OR			19
(aortic arch syndromes[MeSH			
Terms]))			

20

21

22

23

24

25

26

27 **Supplementary Table S2: Indication for aortic arch intervention**

Authors et al	n of patients	Degenerative Aneurysms N (%)	Chronic Dissections N (%)	PAU N (%)	Pseudo-aneurysms N (%)	Other N (%)	Urgent/Emergent cases N (%)
Tsilimparis et al	108	49 (45.4)	42 (38.9)	17 (15.7)	0	0	16 (14.8)
Li et al	16	0	16 (100)	0	0	0	0
Hanna et al	38	17 (44.7)	13 (34.2)	3 (7.9)	5 (13.2)	0	1(3)
Dake et al	31	31 (100)	0	0	0	0	0
Tenorio et al	39	14 (36)	25 (64)	0	0	0	0
Planer	18	-	-	-	-	-	0
Kuzniar et al*	12	0	12 (100)	0	0	0	0
Zhang et al	51	0	51 (100)	0	0	0	0
Verscheure et al	70	0	70 (100)	0	0	0	0
Kudo et al	28	22 (78.6)	6 (21.4)	0	0	0	0
Sato et al	37	33 (89.2)	4 (10.8)	0	0	0	0
Fernandez et al	14	1 (7.1)	2 (14.3)	8 (57.2)	1 (7.1)	2 (14.3)	0
van der Weijde et al	11	8 (72.7)	1 (9)	0	2 (18.2)	0	0
Ferrer er al	24	13 (3)	2 (8.3)	9 (37.5)	0	0	0
Tsilimparis et al	54	24 (45)	26 (48)	4 (7)	0	0	11 (20)
Toya et al	8	3 (37.5)	3 (37.5)	0	2 (25)	0	0
Law et al	5	0	3 (60)	0	0	2 (40)	2 (40)
Tan et al	7	4 (57.1)	1 (14.3)	0	1(14.3)	1 (14.3)	0
<b>Total</b>	<b>571</b>	<b>219/553 (39.6)</b>	<b>277/553 (50.1)</b>	<b>41/553 (7.4)</b>	<b>11/553 (2)</b>	<b>5/553 (0.9)</b>	<b>30/571 (5.3)</b>

28

29

30

31 Missing data are marked with -. Studies are presented in chronological order, from the latest to the oldest one

32 included in the Systematic Review.

33

34 \*This study reports a total of 13 interventions performed on 12 patients. The results are reported as number (N)

35 and percentage (%)

36 PAU: penetrating aortic ulcer

37

38

39

40 **Supplementary Table S3: Definitions adopted by authors of neurological events**  
 41 **(cerebrovascular events and spinal cord ischemia)**

Study	Definition	Reported outcomes
<b>Tsilimparis et al</b>		
Stroke	Society for Vascular Surgery reporting standards for TEVAR (2010)	Minor and major strokes
SCI	Society for Vascular Surgery reporting standards for TEVAR (2010)	Transitory and permanent SCI
<b>Li et al</b>		
Stroke	Clinical presentation	Stroke
SCI	-	-
<b>Hanna et al</b>		
Stroke	Society for Vascular Surgery reporting standards for TEVAR (2010). Confirmed by a neurologist and imaging of the brain in accordance with Neurologic Academic Research Consortium reporting standards, with disability graded according to the modified Rankin Scale for stroke.	Disabling strokes (modified Rankin Scale <2 at 90-day follow up)
SCI	Society for Vascular Surgery reporting standards for TEVAR (2010). Confirmed by a neurologist and imaging of the cord and defined by Society for Vascular Surgery reporting guidelines for SCI	Transitory and permanent SCI
<b>Dake et al</b>		
Stroke	Clinical assessment with disability graded with the modified Rankin Scale at 1 months	Disabling strokes
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI
<b>Tenorio et al</b>		
Stroke	Clinical presentation	Minor strokes/TIA and major strokes
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI
<b>Planer et al</b>		
Stroke	Clinical presentation. All serious adverse events were recorded and adjudicated by an independent Clinical Events Committee (CEC) according to the DEFINE group and the VARC-2 definitions	Disabling and non-disabling strokes
SCI	Clinical presentation of paraplegia. All serious adverse events were recorded and adjudicated by an independent Clinical Events Committee (CEC) according to the DEFINE group and the VARC-2 definitions	Transitory and permanent SCI
<b>Kuzniar et al</b>		
Stroke	Clinical presentation	Transitory and permanent stroke
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI
<b>Zhang et al</b>		
Stroke	NR	NR
SCI	NR	NR
<b>Verscheure et al</b>		
Stroke	Society for Vascular Surgery reporting standards for TEVAR (2010)	Minor and major strokes
SCI	Society for Vascular Surgery reporting standards for TEVAR (2010)	NR
<b>Kudo et al</b>		
Stroke	Clinical presentation	Transient neurologic dysfunction and disabling stroke
SCI	Clinical presentation of paraplegia	Transient neurologic dysfunction and disabling stroke

<b>Sato et al</b>		
Stroke	NR	NR
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI
<b>Fernandez et al</b>		
Stroke	Clinical presentation	Minor and major strokes
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI
<b>Van der Weijde et al</b>		
Stroke	Clinical presentation	Minor and major strokes
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI
<b>Ferrer et al</b>		
Stroke	Clinical presentation, with neurologic assessment carried out by a cardiovascular surgeon with a consulting neurologist called when needed.	TIA and major strokes.
SCI	Clinical presentation of paraplegia, assessed by a cardiovascular surgeon, with a consulting neurologist called when needed.	Transitory and permanent SCI
<b>Tsilimparis et al</b>		
Stroke	Clinical presentation	Minor and major strokes
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI
<b>Toya et al</b>		
Stroke	-	-
SCI	NR	NR
<b>Law et al</b>		
Stroke	Clinical presentation	Minor and major strokes
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI
<b>Tan et al</b>		
Stroke	Clinical presentation	Minor and major strokes
SCI	Clinical presentation of paraplegia	Transitory and permanent SCI

42

43

44 Studies are presented in chronological order, from the latest to the oldest one included in the

45 Systematic Review.

46 SCI: spinal cord ischemia; TIA: transitory ischemic attack. NR: definition of the outcome *not*47 *reported* in the article; (-): outcome not investigated by in the article;

48