

# ONE-STAGE BRACHIOBASILIC ARTERIOVENOUS FISTULA FOR CHRONIC HEMODIALYSIS ACCESS: EXTENSIVE SINGLE CENTRE EXPERIENCE

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## Background

The expanding hemodialysis population has led to increased requirement for more complex vascular access. Basilic vein is characterized by being in most cases a deep vein. In the literature, there is no consensus on the creation of Brachio-basilic Arteriovenous Fistula (BBAVF) in one or two stage techniques. Advocates of superficialization in a second stage technique argue for a lower rate of complications (hematomas) when mobilizing an arterialized vein.

## Objectives:

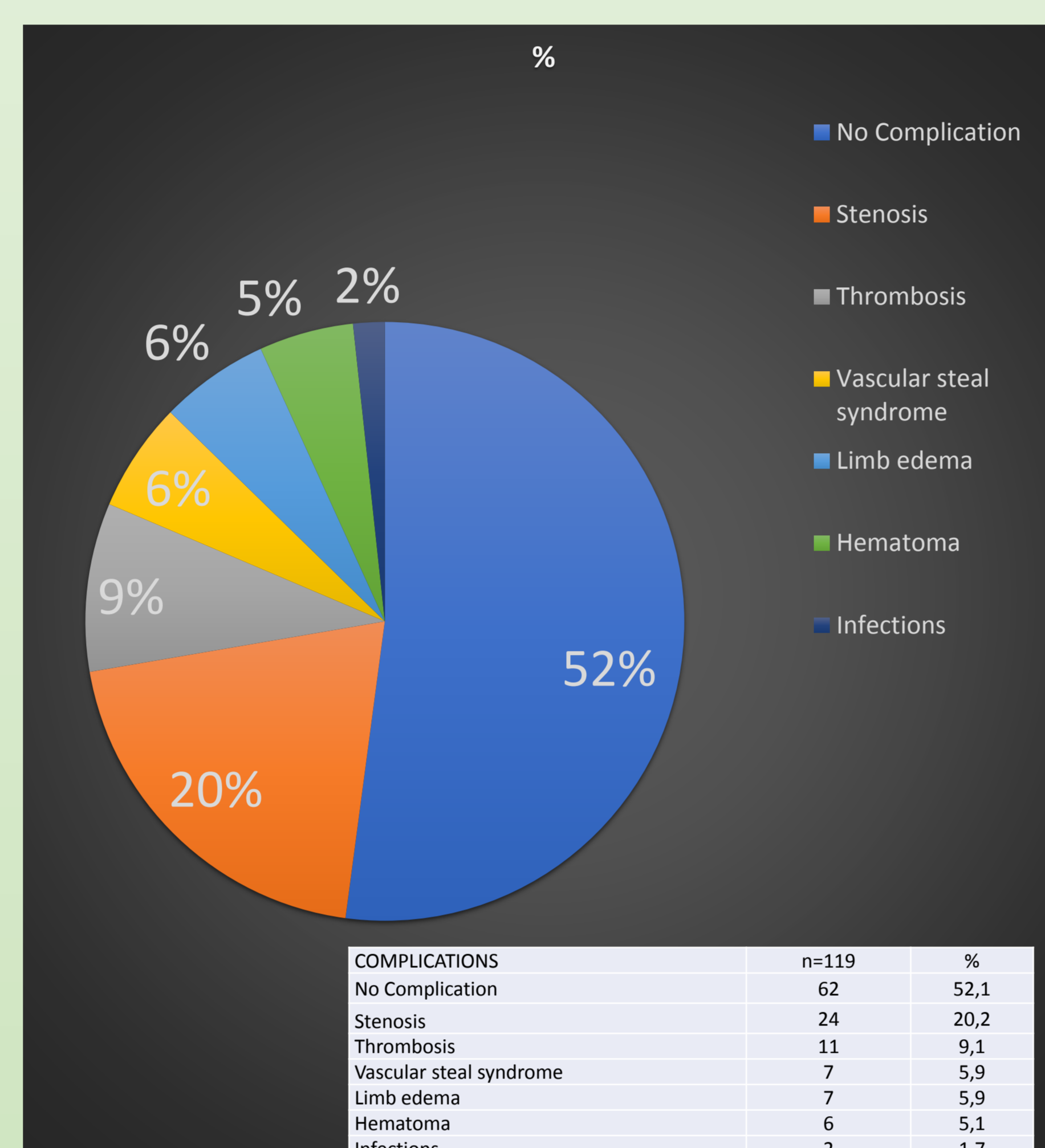
To analyze the results of our vascular unit in the surgical implantation of native brachio-basilic arteriovenous fistula with transposition and superficialization (BBAVF-TS) in a one stage surgical technique.

## Methods

Retrospective study of BBAVF-TS performed between January 1, 2011 and December 31, 2015 at Hospital Clinic of Barcelona. The percentage of primary (PP), assisted primary (APP) and secondary (SP) patency and complications associated were evaluated.

## Results

Variable		P value
Gender (M/F)	M=76(64%) F=43(36%)	NS
Mean age (years)	M=70.1 (± 13.5) F=64.1 (± 14.7)	NS
Hypertension	96 (81%)	NS
Diabetes Mellitus	37 (31%)	NS
Heart disease	14 (11,8%)	NS
Periphereal vascular disease	2 (1.7%)	NS
Dyslipidemia	44 (37%)	NS
Antiplatelet therapy	25 (21%)	NS
Anticoagulant therapy	5 (4.2%)	NS
Previously ipsilateral CVC	14 (11.8%)	NS
Previously Pacemaker	3 (2.5%)	NS
Mean basilic vein diameter (mm)	4.01 (± 0.9)	NS
Mean brachial artery diameter (mm)	3.9 (± 0.8)	NS



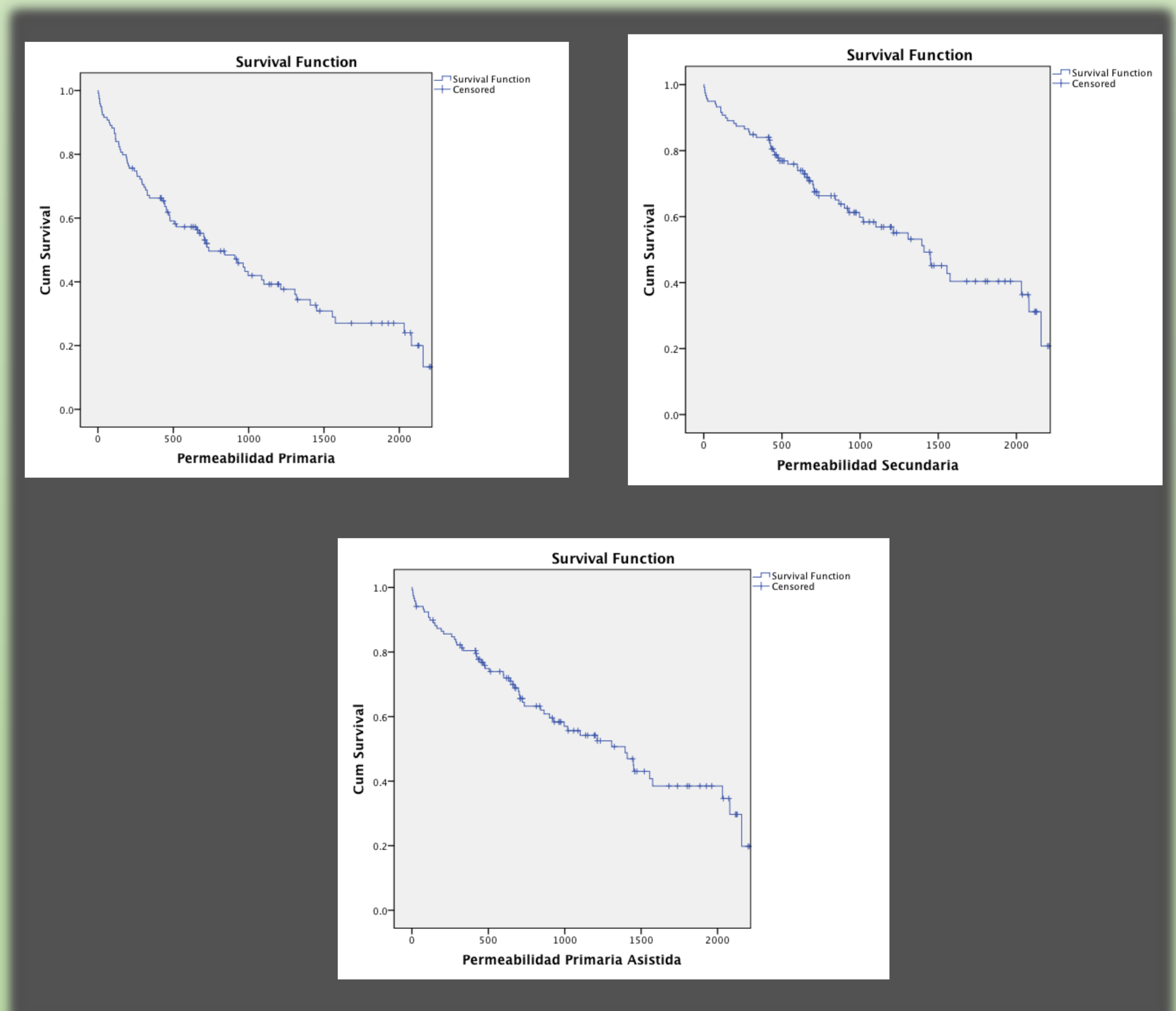
	Frecuency	Angioplasty	Thrombectomy	Assisted interventional surgery
Stenosis				
Estenosis 1ª porcion vena eferente	9	8/9	0/9	1/9
1ª porcion de vena eferente y tercio medio	9	8/9	0/9	1/9
Estenosis tronco inominado	4	4/4	0/4	0/4
Tercio proximal y vena axilar	1	1/1	0/1	0/1
Others	1	1/1	0/1	1/1
Vascular steal syndrome	7	0/7	0/7	5/7

## PATENCIES

	PP	APP	SP
1m (30d)	92,4%	94,1%	95,0%
3m (90d)	89,1%	92,4%	93,3%
6m (180d)	79,8%	87,3%	89,1%
12m (360d)	66,3%	80,4%	84,0%
18m (540d)	57,3%	73,9%	75,9%
3a (1080d)	42,0%	55,6%	58,4%
6a (2160d)	13,3%	19,8%	31,2%

Comorbidities	PP (days)	APP (days)	SP (days)	P Value
Chronic Kidney Disease (Etiology)				
Diabetic Nephropathy	872 ± 154.51	1227.82 ± 165.81	1253.88 ± 164.35	<0.05
NAE	1142.93 ± 114.80	1360.65 ± 117.19	1417.71 ± 116.18	<0.05
Idiopatic	1223.76 ± 224.28	1506.89 ± 216.77	1513.73 ± 215.07	<0.05
Diabetes Mellitus				
No	1039.73 ± 94.60	1247.55 ± 97.67	1303.07 ± 97.77	<0.05
Si	972.99 ± 155.98	1320.68 ± 158.59	1352.33 ± 155.09	
Previous CVC				NS
No	1013.8 ± 387.02	1282.77 ± 87.86	1337.21 ± 87.25	NS
Si	934.72 ± 223.53	1171.72 ± 251.08	1171.72 ± 251.08	

PP: PRIMARY PATENCY; APP: ASSITED PRIMARY PATENCY; SP: SECONDARY PATENCY



## CONCLUSIONS

- According to the results obtained in our study, the performed of BBAVF -ST in a one stage technique presents rates of patency and percentage of complications similar to the two stages technique reported in previews studies.
- Among the major advantages include a better optimization of surgical health resources and shorter permanence time of central venous catheters.

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