

Evaluation of the surgical versus endovascular treatment of ruptured and unruptured pericallosal aneurysms: an international multicentric study

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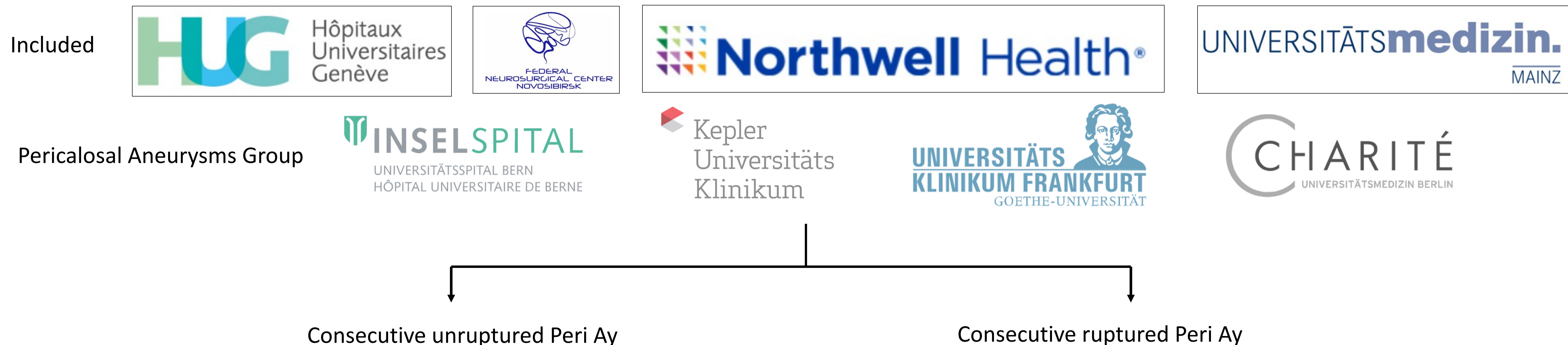
On behalf of the *Pericallosal Aneurysms Study Group*.

Introduction:

Treatment of pericallosal aneurysms (Peri Ay), whether endovascular or surgical, relies more on the neurovascular team experience than on evidence-based guidelines. This study aims to give an overview of the treatments performed across the including center, and to compare endovascular and surgical treatments of PeriAy, ruptured and unruptured.

Methods:

All data were extracted from the *Pericallosal Aneurysm Study Group* data base, an multicentric international cohort collecting data on patients treated for at least one PeriAy, ruptured and unruptured. Outcomes were compared by endovascular versus surgical treatments, and by rupture status. The primary outcome was the mRS at 12 months. Secondary outcomes were the aneurysmal complete occlusion at 12 months, the rate of complications, and vasospasms requiring invasive treatment.



Results:

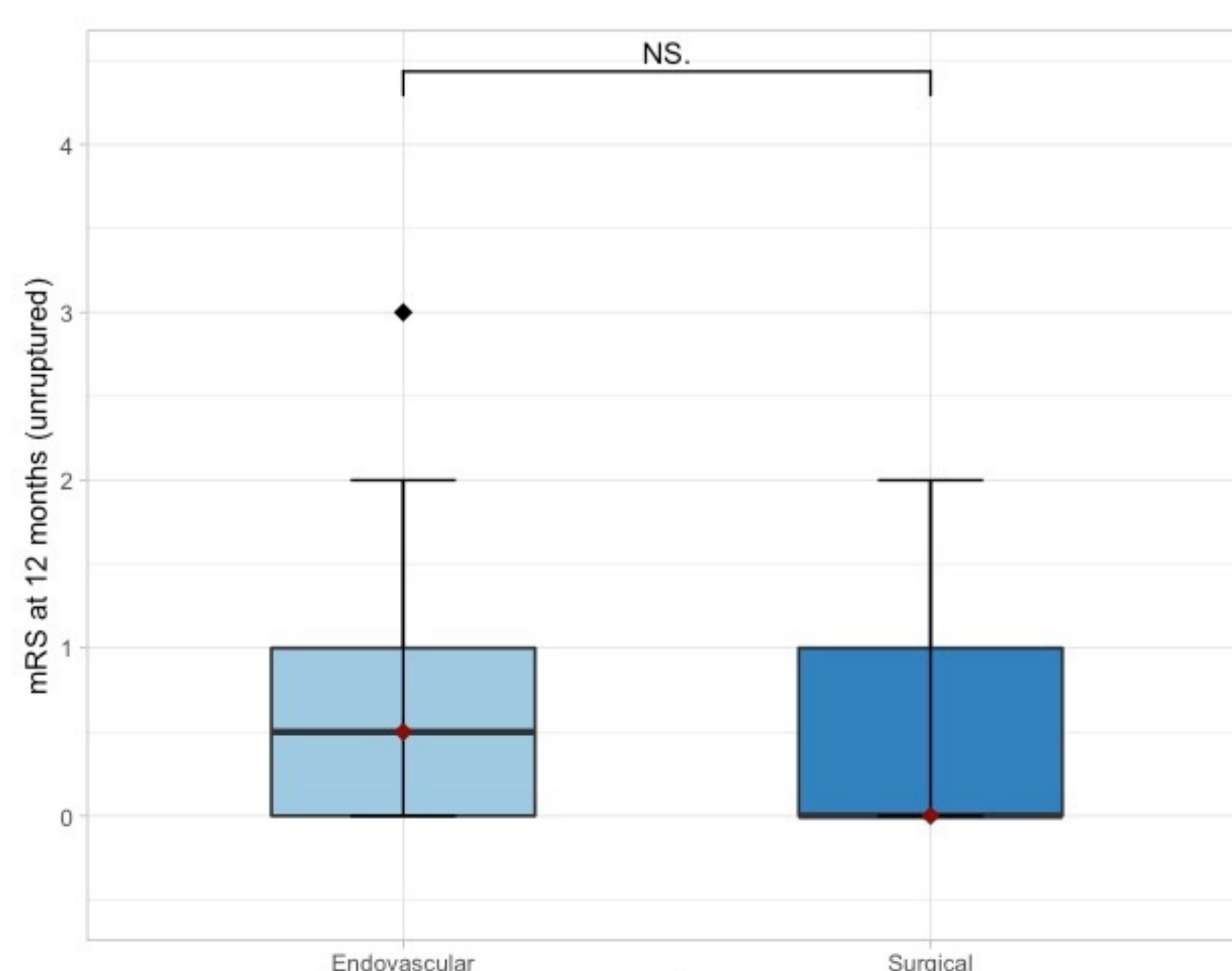
1) Actual standards:

	Surgical	Endovascular	Total
Total	112 (75.2 %)	37 (14.8 %)	149
Ruptured	44 (39.3 %)	24 (64.9 %)	68 (60.7 %)
Unruptured	68 (60.7 %)	13 (35.1 %)	81 (54.3 %)

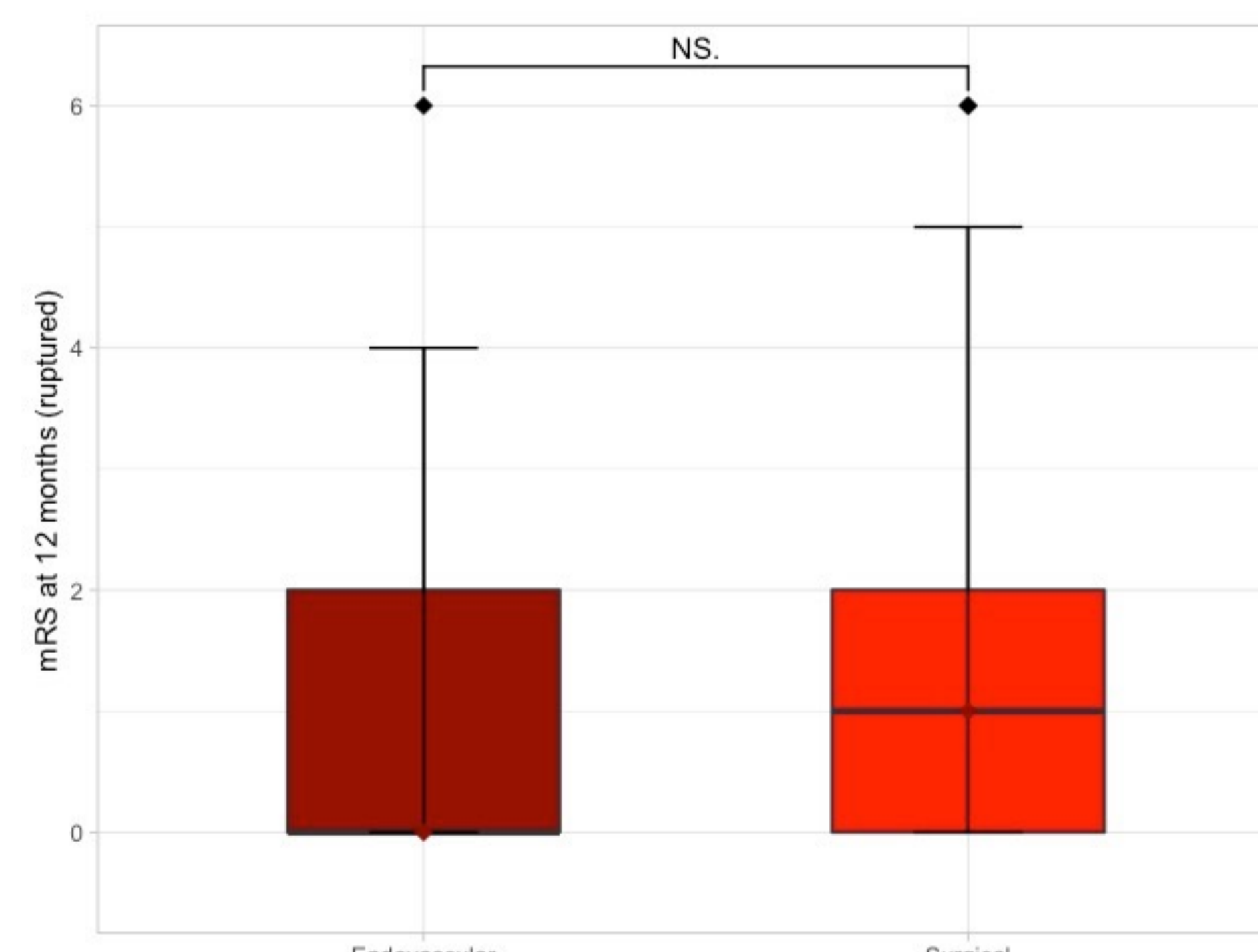
2) Efficacy:

	Surgical		Endovascular		P-value	
	Ruptured	Unruptured	Ruptured	Unruptured	Ruptured	Unruptured
Proximal stenosis	0%	0.2 %	6.7 %	0 %	0.36	1
Invasive treat. for vasospasms	11.4 %	-	43.5 %	-	0.005	-
Complication of the treatment	7.7 %	16.7 %	26.7 %	12.5 %	0.17	0.9
Residual/Reperfusion at 12 months	0 %	0 %	50 %	25 %	0.003%	0.017%

3) mRS 12 months unruptured :



4) mRS 12 months ruptured



Conclusion:

Although surgical treatment reduces the risk of aneurysmal residual perfusion and the need of invasive treatment for vasospasms, ruptured PeriAy are more often treated endovascularly. PeriAy should be considered for surgical treatment, especially if ruptured. Endovascular treatment should be reserved for morbid patients with surgical risk. Multicentric data collection is still ongoing.