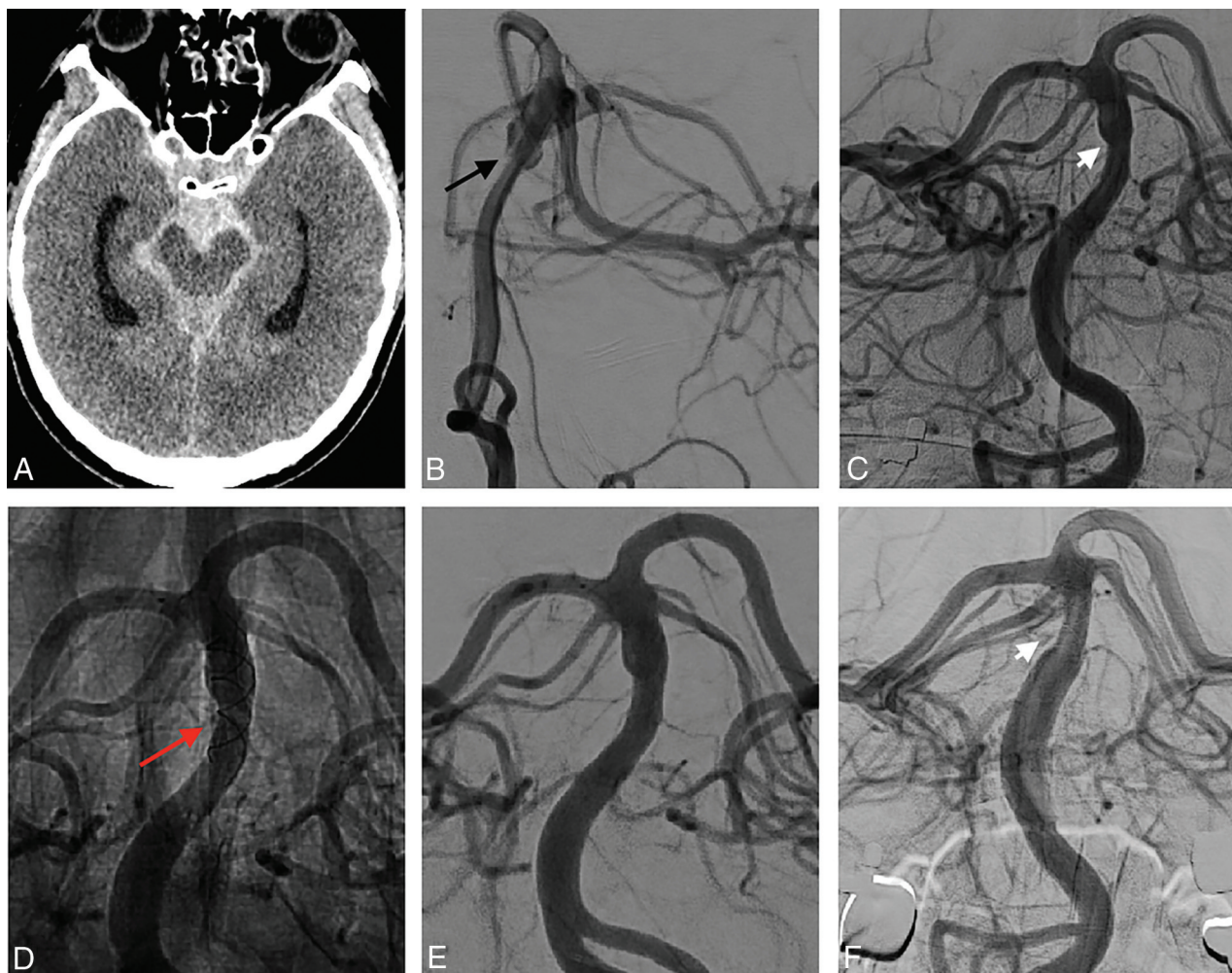




ON-LINE FIGURE. Images obtained in a 50-year-old man with sudden-onset headache and confusion. *A*, An unenhanced axial CT scan reveals a Fisher grade 4 SAH. Oblique (*B*) and frontal (*C*) projections show a ruptured dissecting aneurysm of the distal portion of the basilar artery (*black and white arrows*). *D* and *E*, The aneurysm is treated with a LEO stent (2.5×18 mm) (*red arrow*). There was no rebleeding during follow-up. *F*, A 12-month angiographic image shows the disappearance of the aneurysm and the presence of a mild in-stent stenosis ($<50\%$) related to in-stent intimal hyperplasia (*white arrow*).

On-line Table 1: Extra-aneurysmal flow remodeling of side branches and perforators covered with LEO stents

	No. of LEO Stents Implanted	No. of Covered Side Branches	Immediate Slow Flow within Side Branches	Fate of the Covered Side Branches (Mean Follow-Up in mo)			Territorial Ischemic Lesions Related to Flow Modifications
				Normal	Stenosis/ Remodelling	Occlusion	
Covered side branches							
OphtA	1	6	0	5 (15)	1 (18)	0	0
	2	1	0	1 (13)	0	0	0
AchA	1	7	0	7 (15)	0	0	0
	2	1	0	1 (13)	0	0	0
PcomA	1	4	0	3 (14)	0	1 (18)	0
	2	1	0	1 (13)	0	0	0
A1	1	4	0	3 (14)	1 (24)	0	0
A2	1	9	0	8 (13)	1 (14)	0	0
CM or OF	1	13	0	12 (14)	1 (20)	0	0
M2	1	30	0	28 (13)	1 (20)	1 (24)	0
SCA	1	14	0	12 (13)	2 (18)	0	0
AICA	1	4	0	4 (14)	0	0	0
PCA	1	4	0	4 (15)	0	0	0
Total	—	98	0	89 (91%)	7 (7%)	2 (2%)	—
Mean follow-up	—	—	—	13.5 mo	19 mo	21 mo	—
Perforators							
Sylvian perforators	1	16 ^a	0	15 (15)	0	0	0
BA perforators	2	1 ^a	0	1 (14)	0	1 (13)	1 ^b
	1	7 ^a	0	7 (14)	0	0	0
Total	—	24	0	23 (96%)	0	1 (4%)	0
Mean follow-up	—	—	—	14.5 mo	—	13 mo	—

Note:—OphtA indicates ophthalmic artery; AchA, anterior choroidal artery; CM, callosomarginal artery; OF, orbitofrontal artery; PCA, posterior cerebral artery; BA, basilar artery; —, not available; covered A1 segment, stent from the ICA to M1; covered A2 segment, stent from the A1 to the contralateral A2 or stent from the A1 to the ipsilateral A2 in cases of absence or hypoplastic contralateral A1; SCA, superior cerebellar artery.

^aPerforating arteries were grouped as 1 entity per case (group of perforators) and were counted accordingly. The number of covered perforators indicates the number of “groups of perforators” for each patient (group of Sylvian perforators and group of basilar perforators).

^bSmall and asymptomatic basal ganglia ischemic lesion.

On-line Table 2: Baseline characteristics of the included patients

Variables	No. (%)
Patient characteristics	
Total No. of patients	76
Age (mean) (yr)	54.5 ± 10.5
No. of men	25 (33)
Smoking	27 (35)
Hypertension	33 (43)
Aneurysm characteristics	
Size (mean) (mm)	7.5 ± 7.9
No. of saccular	75 (98)
No. of fusiform	0
No. of dissecting	1 (2)
No. of unruptured	60 (79)
No. of previously ruptured	14 (18)
No. of ruptured and treated in the acute phase	2 (2)
Aneurysm locations	
ICA bif	3 (4)
A1	2 (2.5)
AcomA	11 (14.5)
Distal ACA	11 (14.5)
PcomA	2 (2.5)
OphtA	6 (7.8)
AchA	1 (1.5)
MCA	31 (40)
VB	7 (9.2)
PCA	2 (2.5)

Note:—bif indicates bifurcation; ACA, anterior cerebral artery; VB, vertebrobasilar; AcomA, anterior communicating artery; OphtA, ophthalmic artery; AchA, anterior choroidal artery; PCA, posterior cerebral artery.

On-line Table 3: Endovascular procedure-related data and angiographic and clinical outcomes

Variables	No. (%)
Treatment characteristics	
No. of retreatments of previously treated aneurysms	21 (27.5)
No. of aneurysms previously coiled	18 (23)
No. of aneurysms previously clipped	3 (4)
No. of aneurysms treated with SAC (jailing technique)	66 (86)
No. of patients treated with dual overlapped stents	3 (4)
No. of aneurysms treated with LEO as stent monotherapy	10 (13)
Stent alone for recanalized aneurysms	5 (6.5)
Stent alone as first aneurysm treatment	5 (6.5)
Data of LEO stents	
Size of the stents (mm)	
LEO 2.0 × 12	6 (7.5)
LEO 2.0 × 18	30 (40)
LEO 2.5 × 18	30 (40)
LEO 3.5 × 18	8 (10)
LEO 3.5 × 25	3 (3)
LEO 4.5 × 20	2 (2)
Successful stent deployment	77/79 (97)
Treatment-related complications	
In-stent acute thrombosis	9 (11.8)
Permanent occlusion with clinical consequences	1 (1.3)
Transient occlusion without clinical consequences (RR Ia)	8 (10.5)
Embolic complications	2 (2.6)
Arterial dissection	2 (2.6)
Hemorrhagic complications	0
Overall permanent complications	1 (1.5)
Overall transient complications	12 (15)
Angiographic outcomes	
Complete aneurysm occlusion	62 (81.5)
Neck remnant	14 (18.5)
Incomplete occlusion	0
Chronic intimal hyperplasia	2 (2.5)

On-line Table 4: Univariate analysis of the risk factors associated with flow remodeling (occlusion and arterial narrowing) of the arteries covered with LEO stents

Variables	Flow Remodeling (Occlusion/Arterial Narrowing)	No Flow Remodeling (Normal Artery)	P Value (OR)
Total	9	89	—
Mean age (yr)	47.8 ± 12	54.7 ± 10.5	.06 (.93)
Proportion of male patients	0.44	0.33	.4 (1.57)
Mean radiologic follow-up (mo)	19.5 ± 3.1	13.6 ± 1.9	<.001 ^a (1.85)
Covered artery from the inner curve of the stent	0.11	0.14	.77 (.73)
Covered artery from the outer curve of the stent	0.44	0.53	.63 (.71)
Covered artery from a linear stent	0.44	0.35	.47 (1.65)
Artery covered by multiple stents	0	4	.51
Hypertension	0.55	0.42	.45 (1.67)
Smoking	0.88	0.29	<.001 ^a (18.4)
Flow remodeling PC vs AC	0.9 vs 0.9		.98 (.98)

Note: — indicates not available; PC, posterior circulation; AC, anterior circulation.

^a The results of the multivariate analysis confirmed smoking and length of follow-up (smoking: OR > 20, *P* = .03; length of follow-up: OR = 1.99, *P* = .002) as risk factors associated with arterial remodelling, though the number of events is <20.

On-line Table 5: Angiographic outcome of aneurysms treated with LEO stents as stent monotherapy

Sex/ Age (yr)	Aneurysm Location	Aneurysm Size (mm) (W × H × N)	Aneurysm Characteristics	Type of LEO Stent Used (mm)	Reasons for Treatment with LEO Stent as Monotherapy	Angiographic Outcome/Last DSA Follow- Up (mo)
1) F/32	PcomA	3 × 3 × 2	U Saccular	3.5 × 18	ICA bifurcation aneurysm treated with coils + LEO stent; the LEO was deployed to cover a second small PcomA aneurysm (Fig 3)	RR I/24
2) M/61	MCA bif	3 × 2 × 4	Previously R and coiled (retreatment)	2.5 × 18	Very small recanalized aneurysm with large neck difficult to treat with conventional coiling or SAC	RR I/18
3) F/65	MCA bif	2 × 3 × 2	U irregular morphology	2.5 × 18	Very small irregular aneurysm; simple coiling was not possible because of the unstable microcatheter position inside the aneurysm	RR III/11
4) M/50	BA	2 × 4	R dissecting	2.5 × 18	Dissecting aneurysm treated in the acute phase (On-line Fig 1)	RR I/12
5) F/74	Distal A2 (CM)	3 × 2 × 4	Previously R and coiled (retreatment)	2.0 × 18	Partial coiling in the acute phase; the CM artery was coming from the neck, resulting in the coil falling out of the aneurysm into the branch	RR I/15
6) M/70	MCA	3 × 3 × 4	U previously treated with WEB device (retreatment)	2.5 × 18	Small aneurysm recanalization after WEB, difficult to treat with conventional coils or SAC because of the irregular shape of the remnant and the instable position of the microcatheter	RR I/16
7) F/60	A1 segment	3 × 4 × 4	U previously coiled (retreatment)	2.0 × 18	Small recanalized aneurysm; simple coiling was not possible because of the unstable microcatheter position inside the aneurysm	RR I/15
8) F/54	Distal A2 (CM)	3 × 3 × 3	Previously R and coiled (retreatment)	2.5 × 18	Partial coiling in the acute phase; the CM artery arose from the neck, resulting in the coil falling out of the aneurysm into the branch	RR III/10
9) M/41	M1	2 × 2	U irregular morphology	2.0 × 18	MCA bifurcation aneurysm treated with coils + LEO stent; the LEO was deployed to cover the second small M1 aneurysm	RR I/15
10) F/47	Distal A2	5 × 4 × 4	U irregular morphology	2.5 × 18	Medium-sized distal ACA aneurysm with branches coming from the aneurysm	RR III/24

Note:—W indicates width; H, height; N, neck; U, unruptured; R, ruptured; bif, bifurcation; ACA, anterior cerebral artery; CM, callosomarginal artery; BA, basilar artery.