

Microsurgical Retreatment of Previously Coiled Cerebral Aneurysms

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Introduction

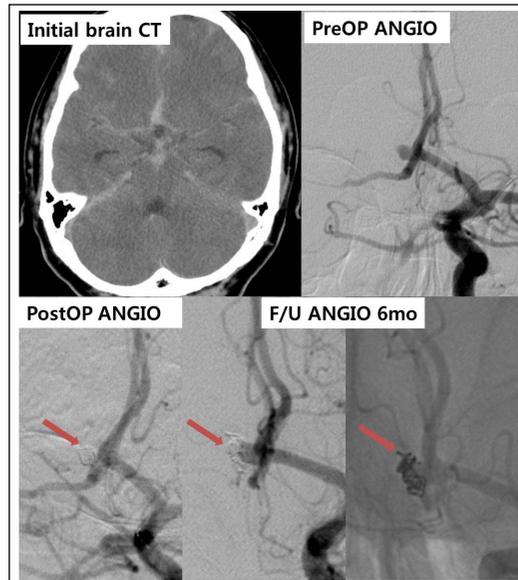
- Regrowth or coil compaction after endovascular treatment : 6.1%-33.6%
- Therapeutic option : Endovascular retreatment, Microsurgical clipping
- Review of microsurgical treatment for therapeutic option of previously coiled aneurysms

Patient population

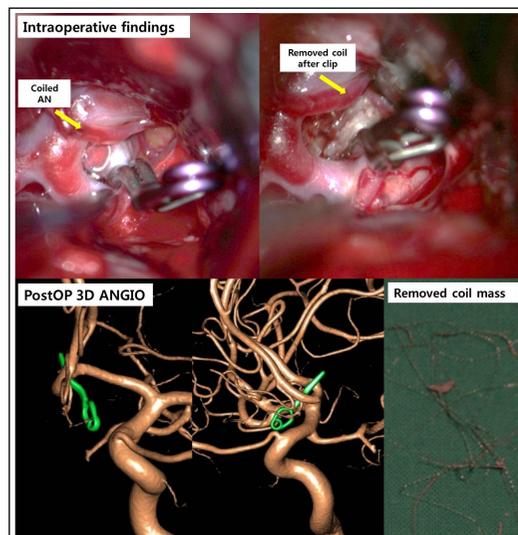
Period	Jan 2005 and Dec 2011 (372 pts.)
No. of patients	N=12 (3.1%)
Mean age (yrs)	54.2 ± 14.3 range (40 - 69)
Sex	M: 4 F: 8
Presenting symptoms	SAH: 8 Incidental: 4
Cause	Residual neck remnant : 8 patients Coil compaction : 4 patients
Location	PCoA : 6 pts. ACoA : 4
Mean Time re-treatment	14.3 ± 8.4 range (months)
Size	5.74 ± 3.0 (2.4-13.8) ~ 9.37 ± 2.84 (3-12.9)

Case I M/40 SAH (H-H 3)

Coil embolization
(near total occlusion)

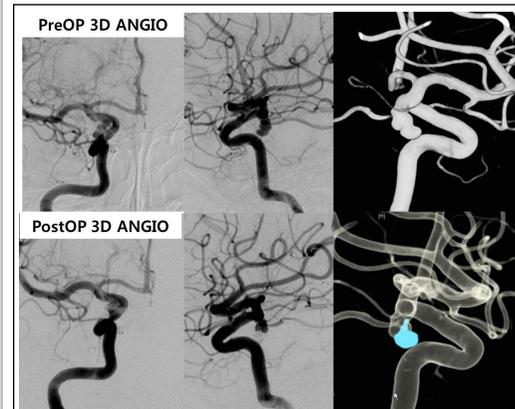


Late surgery (after EVT 6mo. later)
Surgical treatment with coil removal
d/t not enough free space for clip blade

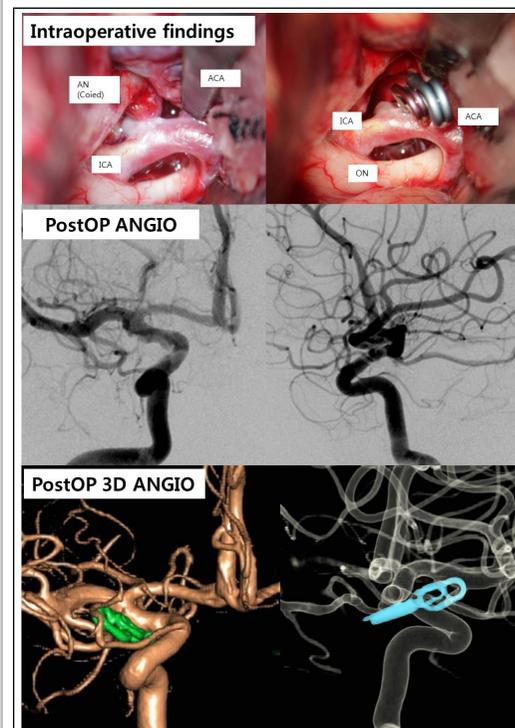


Case II F/48 3rd N. palsy

Coil embolization
(residual neck remnant)



Early surgery (after EVT 5days later)
Surgical treatment with coil removal
d/t mass effect (3rd N. palsy)

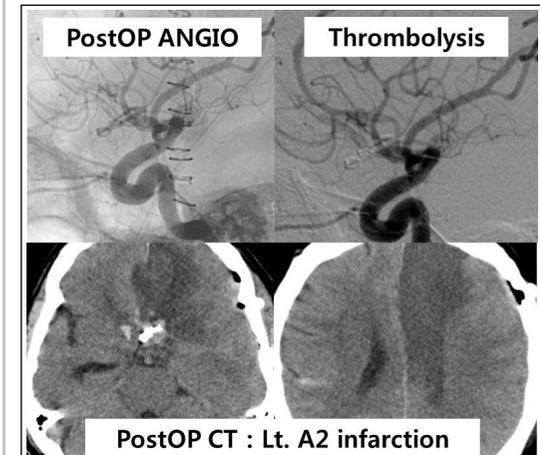


Case III F/64 Incidental finding

Coil embolization
(A2 thromboembolism)



Early surgery (immadiate after EVT)
Surgical treatment with coil removal
d/t Thromboembolism



Summary of 12 patients with Re-treatment

No.	Sex/Age	Location	H-H	Presentation	Size(mm)	Surgical indication	Treatment	mRS	Time interval
1	F/54	AchA	0	Incidental	6.3*3.3	neck regrowth	Clipping only	0	40 months
2	M/50	ACoA	1	SAH	8.3*3.8	Coil compaction	Clipping only	1	13 months
3	F/64	ACoA	0	Incidental	4.5*4.5	Coil herniation	Total Coil removal	0	4 days
4	M/40	ACoA	2	SAH	4.0*4.0	Coil compaction	Total Coil removal	1	6 months
5	M/54	Mcbif	2	SAH	13.8*12.9	Aneurysm Rupture	Clipping only	6	108 months
6	F/69	PCoA	3	SAH	2.4*4.7	Residual neck remnant	Clipping only	2	10 days
7	F/54	PCoA	1	SAH	6.5*4.0	Daughter sac coil failure	Clipping only	1	2 days
8	F/48	PCoA	0	3rd nerve palsy	6.0*3.0	Residual neck remnant	Total Coil removal	0	3 days
9	F/63	PCoA	2	SAH	5.9*8.4	Residual neck remnant	Clipping only	3	10 days
10	F/45	PCoA	1	SAH	3.1*3.0	Coil compaction & neck regrowth	Clipping only	1	3 months
11	F/56	PCoA	3	SAH	4.0*4.5	Residual neck remnant	Clipping only	0	20 days
12	M/55	ACoA	0	Incidental	4.1*4.8	Residual neck remnant	Clipping only	0	15 days

Conclusions

- Safe, effective and permanent treatment option of residual or regrowth of coiled aneurysm
- Clipping with/without total/partial coil mass removal
 - Mass effect of regrowth coiled aneurysm
 - Adjacent to vital structure
 - Narrow free space of coiled aneurysmal neck
- Proximal occlusion and bypass
- Vessel reconstruction, Aneurysm wrapping