

**On-line Table 1: Details regarding patient demographics, clinical presentation, treatment outcomes, anatomy, and classification of dAVFs**

Age (yr)/Sex	Cognard Type	Side	Hemorrhage	Clinical Presentation	Location	Principal Arterial Anatomy	First-Secondary Arterial Anatomy	Second-Secondary Arterial Anatomy	Venous Shunt	Venous Outflow	No. of Sessions	Approach	Artery Access	Artery Embolic Agent	Venous Access	Vein Embolic Agent	Control 6 Months	mRS Before	mRS 6 Months	Complication
44 M	III	R	No	Pulsatile tinnitus	Petrosal	Meningeal recurrent branch of ILT	PMA of OA	—	Superior petrosal vein	Basal vein	1	Venous	—	—	Basal vein	Onyx 18 + coils	Total occlusion	0	0	—
76 M	III	L	No	Cerebellar syndrome	Petrosal	Tentorial medial branch of MHT	Meningeal recurrent branch of ILT	—	Superior petrosal vein	Basal vein	1	Arterial	MMA	Onyx 18	—	—	Total occlusion	0	0	—
38 M	IV	L	No	Hemiparesis	Petrosal	Tentorial branch of MMA	PMA of OA	Meningeal recurrent branch of ILT	Superior petrosal vein	Basal vein	1	Arterial	MMA	Onyx 18	—	—	Total occlusion	3	1	Hydrocephaly after venous thrombosis and midbrain compression
40 M	IV	R	No	Incidental	Petrosal	Tentorial medial branch of MHT	Tentorial branch of MMA	PMA of OA	Superior petrosal vein	Basal vein	1	Arterial	MMA	Onyx 18	—	—	Total occlusion	0	0	—
39 M	III	R	No	Headache	Petrosal	Squamous branch of MMA	Tentorial medial branch of MHT	Transosseous of OA	Superior petrosal vein	Basal vein	2	Arterial	MHT/MMA	Onyx 18	—	—	Total occlusion	0	0	—
61 F	III	R	Yes	Cerebellar syndrome	Free edge	Meningeal branch of SCA	Tentorial medial branch of MHT	—	Tectal vein	Torcular	1	Arterial	Meningeal branch of SCA	Histoacryl 20%	—	—	Total occlusion	1	1	Ischemia due to reflux into the SCA
57 M	IV	R + L	Yes	Hemiparesis	Free edge	Tentorial medial branch of MHT	Meningeal branch of SCA	Tympanic branch of APA	Tectal vein	Torcular	3	Arterial + venous	APA + MHT	Onyx 18	Basal vein	Onyx 18	Total occlusion	3	2	—
40 M	IV	R + L	Yes	Headache	Free edge	Tentorial branch of MMA	PMA of OA	Meningeal branch of SCA	Tectal vein	Torcular	1	Arterial	MMA	Onyx 18	—	—	—	2	1	—
58 M	III	L	No	Headache	Free edge	Meningeal branch of SCA	—	—	Tectal vein	Torcular	1	Arterial	Meningeal branch of SCA	Onyx 18	—	—	—	0	0	—
73 M	IV	L	No	Acute cervical pain	Tentorial posterior	PMA of VA	Transosseous of OA	Petrosal branch of MMA	Declival vein	Cerebellar cortical vein	1	Arterial	MMA + PMA of OA	Onyx 18	—	—	Total occlusion	0	0	—
60 M	IV	R	No	Cerebellar syndrome	Tentorial posterior	PMA of VA	Transosseous of OA	Meningeal recurrent branch of ILT	Declival vein	Cerebellar cortical vein	1	Arterial	PMA + transosseous OA	Onyx 18	—	—	Total occlusion	0	0	Transient hemiparesis
64 M	IV	R	Yes	Headache	Tentorial posterior	PMA of VA	PMA of OA	Tentorial branch of MMA	Declival vein	Cerebellar cortical vein	1	Arterial	MMA	Onyx 18	—	—	Total occlusion	2	1	—
80 M	IV	L	No	Incidental	Tentorial posterior	PMA of VA	Transosseous of OA	Squamous branch of MMA	Declival vein	Cerebellar cortical vein	1	Arterial	MMA	PHIL	—	—	Total occlusion	0	0	—
74 M	III	R	No	Cerebellar syndrome	Tentorial posterior	PMA of VA	PMA of OA	Squamous branch of MMA	Declival vein	Cerebellar cortical vein	1	Arterial	MMA	PHIL	—	—	Total occlusion	2	1	—
52 M	III	R	Yes	Headache	Tentorial posterior	Transosseous of occipital artery	Tentorial branch of MMA	—	Declival vein	Cerebellar cortical vein	1	Arterial	Transosseous of OA	Onyx 18	—	—	—	0	0	—
63 F	IV	R + L	Yes	Headache	Tentorial posterior	Tentorial branch of MMA	PMA of VA	—	Declival vein	Cerebellar cortical vein	2	Arterial	MMA	Onyx18/SQUID 18	—	—	Total occlusion	1	0	—
30 F	III	R	No	Incidental	Tentorial posterior	PMA of VA	—	—	Declival vein	Cerebellar cortical vein	1	Arterial	PMA of VA	Onyx 18	—	—	Total occlusion	0	0	—
43 F	IV	L	No	Incidental	Petrosal	Transosseous of OA	Tentorial medial branch of MHT	Jugular branch of APA	Superior petrosal vein	Lateral tentorial sinus	1	Arterial	Transosseous of OA	PHIL	—	—	Total occlusion	0	0	—
23 M	III	L	No	Headache	Tentorial posterior	PMA of vertebral artery	—	—	Cerebellar inferior vein	Lateral tentorial sinus	1	Arterial	PMA of VA	SQUID	—	—	Total occlusion	0	0	—
33 M	III	R	Yes	Headache	Tentorial posterior	Tentorial medial branch of MHT	Tentorial branch of MMA	—	Cerebellar inferior vein	Lateral tentorial sinus	1	Arterial + venous	MMA	Onyx 18	Tentorial vein	Onyx 18 + coils	Total occlusion	0	0	—

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**On-line Table 1: Continued**

Age (yr)/Sex	Cognard Type	Side	Hemorrhage	Clinical Presentation	Location	Principal Arterial Anatomy	First Secondary Arterial Anatomy	Second Secondary Arterial Anatomy	Venous Shunt	Venous Outflow	No. of Sessions	Approach	Artery Access	Artery Embolic Agent	Venous Access	Vein Embolic Agent	Control 6 Months	mRS Before	mRS 6 Months	Complication
76 M	V	R	No	Myelopathy	Foramen magnum	Hypoglossal branch of APA	—	—	Lateral medullary vein	Plexus venous perimedullary	1	Arterial	APA	Histoacryl 20 <sup>a</sup>	—	—	Total occlusion	4	2	—
54 F	V	L	No	Myelopathy	Foramen magnum	PMA of OA	Jugular branch of APA	PMA of VA	Lateral medullary vein	Plexus venous perimedullary	2	Arterial	PMA of OA/PMA of VA	Glue/Onyx 18	—	—	Total occlusion	3	2	—
44 M	V	R	No	Myelopathy	Foramen magnum	PMA of VA	—	—	Lateral medullary vein	Plexus venous perimedullary	1	Arterial	PMA of VA	Onyx 18	—	—	Total occlusion	2	1	—
56 M	V	R	No	Myelopathy	Petrosal	Tentorial medial branch of MHT	Tentorial branch of MMA	—	Superior petrosal vein	Plexus venous perimedullary	1	Arterial	MMA	Onyx 18	—	—	Total occlusion	3	1	CN IV transient palsy
55 M	V	R	Yes	Headache	Foramen magnum	PMA of VA	PMA of OA	Jugular branch of APA	Lateral medullary vein	Plexus venous perimedullary	1	Arterial	APA + PMA OA	Histoacryl 20 <sup>a</sup> + Onyx 18	—	—	Total occlusion	0	0	—
58 M	V	L	No	Incidental	Foramen magnum	PMA of VA	PMA of OA	Hypoglossal branch of APA	Lateral medullary vein	Plexus venous perimedullary	1	Arterial	PMA OA	Onyx 18	—	—	Total occlusion	0	0	—

**Note:**—M indicates male; F, female; R, right; L, left; APtA, ascending pharyngeal artery; ILT, infero lateral trunk; MHT, mMeningoHypophyseal trunk; MMA, middle meningeal artery; OA, occipital artery; PMA, posterior meningeal artery; SCA, superior cerebellar artery; VA, vertebral artery; CN, cranial nerve; —, no data available.

<sup>a</sup> Histoacryl (Braun, Melsungen, Germany).

**On-line Table 2: dAVFs according their basal outflow—anatomy and treatment**

Venous outflow	Basal vein	Torcular	Cerebellar veins	Lateral tentorial sinus	Perimedullary veins
No. of dAVFs	5 (19%)	4 (15%)	8 (31%)	3 (12%)	6 (23%)
Venous shunt (No.)	Superior petrosal vein (5)	Tectal vein (4)	Declival vein (8)	Cerebellar inferior veins (2)	Lateral medullary vein (5)
Localization of the shunt (No. of dAVFs)	Petrosal (5)	Free edge (4)	Tentorial posterior (8)	Superior petrosal vein (1)	Superior petrosal vein (1)
Arterial feeders (No.) (%)	5 (100%) MHT/ILT	4 (100%) Meningeal branch of SCA	7 (87.5%) PMA	Tentorial posterior (2)	Foramen magnum (5)
	4 (80%) MMA	3 (75%) MHT	6 (75%) MMA	Petrosal (1)	Petrosal (1)
Hemorrhage (No.)	0	3 (75%)	3 (37.5%)	2 (66%) MHT	4 (67%) PMA
Approach	Arterial (venous if no safe access)	Arterial (venous if no safe arterial access)	Only arterial	1 (33.3%)	1 (17.7%)
Preferred arterial access	MMA	Meningeal branch of SCA	MMA	Arterial (venous if no safe arterial access)	Only arterial
				MMA	PMA if FM
					MMA if petrosal

**Note:**—TOB indicates transosseous branch of occipital artery; FM, foramen magnum; SCA, superior cerebellar artery.