

Online Table 1: Demographic and clinical characteristics of study subjects

Characteristics	GLOS Positive	GLOS Negative	p-value
No. (%)	26 (5.9)	413 (94.1)	
Age, Median (IQR), yr	71.5 (51-75.5)	55 (44-66)	0.001
Female Sex, No. (%)	14 (53.8)	228 (55.2)	0.9
Creatinine, Median (IQR), $\mu\text{mol/l}$	72.5 (67.8-98)	64 (44-77)	0.005
eGFR, Median (IQR), ml/min/1.73m^2	84 (61.5-99.5)	101 (89-113)	<0.001
Classification of renal function			<0.001*
G1 (eGFR ≥ 90 ml/min/1.73m^2)	12 (46.2)	308 (74.6)	
G2 (eGFR 60-89 ml/min/1.73m^2)	8 (30.7)	94 (22.8)	
G3 (eGFR 30-59 ml/min/1.73m^2)	6 (23.1)	11 (2.7)	
Time interval between GBCA injection and index brain MRI, median (IQR), hrs	62 (35-85.3)	91 (51.5-133)	0.003
Time interval classification			0.01*
0 - 24 hrs	3 (11.5)	38 (9.2)	
25 - 72 hrs	14 (53.8)	116 (28.1)	
73 - 120 hrs	8 (30.8)	137 (33.2)	
> 120 hrs	1 (3.8)	112 (29.5)	
Frequency of GBCA injections, Median (IQR)	1 (1-1.3)	1 (1-1)	0.9
GBCA doses, Median (IQR), ml	16 (10-26.5)	16 (10-20)	0.9
GBCA types			0.9 [†]
Gadobutrol (Gadovist), No. (%)	0	13 (3.1)	
Gadobenate dimeglumine (MultiHance), No. (%)	16 (61.5)	254 (61.5)	
Gadoteridol (ProHance), No. (%)	10 (38.5)	142 (34.4)	
Two different injections (Gadobenate dimeglumine and Gadoteridol), No. (%)	0	4 (0.1)	
MRI evidence of prior Cataract surgery, No. (%)	7 (26.9)	37 (9)	0.01 [†]
MRI diagnosis			0.2 [†]
Brain tumors	9 (34.6)	141 (34.1)	
Baseline post EVT	1 (3.8)	82 (19.9)	
Intracranial hemorrhage	2 (7.7)	27 (6.5)	
Ischemic stroke	2 (7.7)	22 (5.3)	
Inflammatory/Infection	3 (11.5)	36 (8.7)	
Normal MRI brain	4 (15.4)	29 (7)	
Others	5 (19.2)	76 (18.4)	

Note: GLOS: gadolinium leakage in ocular structures; IQR: interquartile range; GBCA: gadolinium-based contrast agents; eGFR: estimated glomerular filtration rate; EVT: endovascular therapy; *Chi-square test; [†]Fisher's exact test

Online Table 2: Patterns of gadolinium leakage in ocular structures (GLOS) and clinico-radiologic characteristics of GLOS positive subjects

Study ID	Sex	Age (y)	Cr	eGFR	Anterior Segment		Posterior Segment		Time interval between GBCA injection and index brain MRI (hrs.)	Indication	MRI findings
					Right	Left	Right	Left			
1	F	82	144	31	++	++	++	++	27	Multiple myeloma	Normal
2	F	72	73	75	+	+	-	-	6	Rule out metastasis	Normal
3	M	84	115	54	+	+	+	+	48	TIA	Microangiopathy
4	F	49	156	35	++	++	++	++	102	Hemorrhage	SAH/ IVH
5	M	62	95	78	++	++	+	+	36	Lymphoma	Normal
6	M	82	57	94	Prosthesis	+	Prosthesis	+	24	Bulbar dysfunction	Microangiopathy
7	F	28	72	101	++	++	+	+	44	Lymphoma	FLAIR sulcal hyperintensity
8	M	81	39	106	-	-	+	+	66	Meningioma Resection	Resection bed surgical changes
9	M	67	74	96	-	-	+	+	91	Tumor resection	Resection bed surgical changes
10	F	71	67	84	++	++	+	+	15	Rule out cerebral sinovenous thrombosis	Cerebral sinovenous thrombosis
11	M	44	90	93	-	-	+	+	27	Work up of septic emboli, HIV, post TAVR	Normal
12	M	81	66	91	-	-	+	+	67	Lymphoma, rule out CNS involvement	Incidental left middle cranial fossa arachnoid cyst
13	F	68	22	121	-	-	+	+	161	Rule out abscess, post ependymoma resection	Brain abscess
14	M	77	66	93	-	-	+	+	114	Rule out stroke	Left temporal infarct

15	M	72	107	64	-	-	+	+	59	Post DAVF embolization	Expected post embolization findings
16	F	72	69	81	-	-	+	+	46	Fall with decreased LOC	SDH
17	F	27	31	144	-	-	+	+	60	Tuberculosis, altered LOC	Basal meningitis, BG infarcts
18	M	51	70	107	-	-	+	+	56	Seizures	Unremarkable
19	M	51	143	51	-	-	+	+	85	Rule out mycotic aneurysm	Brain abscess
20	F	56	63	99	-	-	+	-	86	Vertebral dissection	Cerebellar infarcts
21	F	79	93	54	-	-	+	+	72	Stroke	Left cerebral infarcts
22	F	77	65	84	-	-	+	+	83	Tumor resection	Surgical changes
23	F	66	124	41	-	-	+	+	78	Fall, prior Renal transplant	Ring enhancing lesion, proven lymphoma
24	F	76	71	76	-	-	-	+	32	Follow up of pituitary tumor	Pituitary macroadenoma
25	F	75	77	69	-	-	+	+	117	Rule out stroke	Microangiopathy
26	M	50	79	104	-	-	+	-	64	Post DAVF embolization	Expected changes

Note: F: female; M: male; BG: basal ganglia; DAVF: dural arteriovenous fistula; GBCA: gadolinium-based contrast agent; GLOS: gadolinium leakage in ocular structures; LOC: level of consciousness; SAH/IVH: subarachnoid hemorrhage/intraventricular hemorrhage; TAVR: transcatheter aortic valve replacement; TIA: transient ischemic attack; -: negative for GLOS, +: mild positive for GLOS, ++: intense GLOS