

S1: Summary of patient demographic characteristics for the 17 cohort studies that met inclusion criteria, presented individually and pooled together. *

Authors & Year	No. of Pts	No. of Females	Med. Age (yr)†	Risk Factors‡	Presenting Signs/Symptoms				Symptom Duration (days)	Sinus Involvement			
					Headache	FND	Seizure	AMS		SSS	St	Tr	Sg
Ma et al.[17] 2016	23	13/23 (56.5%)	37						21	17/23 (73.9%)		9/23 (39.1%)	3/23 (13.0%)
Mokin et al.[13] 2015	11	6/11 (54.5%)	40	NKn:2; Gen:1; Hem:1; Acq:3; Drg:1; Ifc:1; Mlg:1; Oth:2;					3	6/11 (54.5%)		8/11 (72.7%)	7/11 (63.6%)
Zhen et al.[11] 2014	8	6/8 (75.0%)	27.5	NKn:2; Hem:3; Acq:3;	8/8 (100.0%)	6/8 (75.0%)	2/8 (25.0%)		3-12	3/8 (37.5%)	6/8 (75.0%)	6/8 (75.0%)	
Shui et al.[12] 2014	26	19/26 (73.1%)	28.9	NKn:5; Hem:5; Acq:9; Ifc:4; Oth:3;						20/26 (76.9%)		14/26 Tr/Sg § (53.8%)	
Siddiqui et al.[15] 2014	34	26/34 (76.5%)	35		34/34 (100.0%)	28/34 (82.4%)	17/34 (50.0%)	21/34 (61.8%)					
Poulsen et al.[18] ¶ 2013	6												
Mortimer et al.[19] 2013	9	7/9 (77.8%)	5	NKn:5; Hem:2; Acq:1; Ifc:1; Oth:1;	3/9 (33.3%)	5/9 (55.6%)	3/9 (33.3%)	7/9 (77.8%)		6/9 (66.7%)	6/9 (66.7%)	8/9 (88.9%)	3/9 (33.3%)
Li et al.[20] 2013	52	22/52 (42.3%)	29	NKn:11; Gen:6; Hem:6; Acq:13; Drg:2; Ifc:15; Mec:2; Ifl:1; Mlg:3;	52/52 (100.0%)	7/52 (13.5%)	11/52 (21.2%)	15/52 (28.8%)	14.5	37/52 (71.2%)	8/52 (15.4%)	49/52 (94.2%)	28/52 (53.8%)
Jankowitz et al.[7] 2012	6	5/6 (83.3%)	57.5	Hem:3; Drg:1; Mec:1; Mlg:1; Oth:1;	3/6 (50.0%)	1/6 (16.7%)	2/6 (33.3%)	4/6 (66.7%)		3/6 (50.0%)	2/6 (33.3%)	3/6 (50.0%)	1/6 (16.7%)
Dashti et al.[6] 2011	13	7/13 (53.8%)	45	Gen:1; Acq:1; Drg:4; Ifc:2; Ifl:2;	6/13 (46.2%)	6/13 (46.2%)		4/13 (30.8%)		9/13 (69.2%)			
Choulakian et al.[5] 2010	4			Hem:2; Drg:1; Ifc:1; Mec:2; Mlg:2;		1/4 (25.0%)	3/4 (75.0%)	3/4 (75.0%)		4/4 (100.0%)		2/4 (50.0%)	1/4 (25.0%)
La Barge et al.[9] 2009	9	5/9 (55.6%)	18		6/9 (66.7%)	1/9 (11.1%)	3/9 (33.3%)	1/9 (11.1%)		7/9 (77.8%)	2/9 (22.2%)	8/9 (88.9%)	6/9 (66.7%)
Modi et al.[21] 2008	4	4/4 (100.0%)	53	NKn:1; Acq:1; Ifc:1; Mec:2;		1/4 (25.0%)	2/4 (50.0%)	2/4 (50.0%)	1.5	4/4 (100.0%)		3/4 (75.0%)	
Zhang et al.[10] 2008	6	5/6 (83.3%)	26	NKn:2; Acq:2; Ifl:2;	5/6 (83.3%)	3/6 (50.0%)	2/6 (33.3%)	4/6 (66.7%)		6/6 (100.0%)	3/6 (50.0%)	6/6 (100.0%)	6/6 (100.0%)
Tsai et al.[22] 2007	15		38		11/15 (73.3%)	5/15 (33.3%)	3/15 (20.0%)	5/15 (33.3%)	14				
Kirsch et al.[8] 2007	4	3/4 (75.0%)	34	Gen:1; Drg:2; Ifl:1; Oth:1;	2/4 (50.0%)	2/4 (50.0%)	2/4 (50.0%)	2/4 (50.0%)	2.5	3/4 (75.0%)	1/4 (25.0%)	3/4 (75.0%)	3/4 (75.0%)
Baker et al.[16] 2001	5	4/5 (80.0%)	47	NKn:1; Hem:2; Acq:1; Drg:1; Mlg:1;	4/5 (80.0%)	3/5 (60.0%)	1/5 (20.0%)			5/5 (100.0%)	2/5 (40.0%)	5/5 (100.0%)	1/5 (20.0%)

Total	235	132/210 (62.9%)		Acq:34 (23%) NKn:29 (20%) Ifc:25 (17%) Hem:24 (16%) Drg:12 (8%)	Oth:10 (7%) Gen:9 (6%) Mlg:8 (5%) Mec:7 (5%) Ifl:6 (4%)	134/169 (79.3%) 33.3- 100.0%	69/169 (40.8%) 11.1- 82.4%	51/169 (30.2%) 20.0- 50.0%	68/169 (40.2%) 11.1- 77.8%	1.5-21	130/180 (72.2%) 37.5- 100.0%	30/99 (30.3%) 15.4- 75.0%	110/141 (78.0%) 39.1- 100.0%	59/129 (45.7%) 13.0- 100.0%
Range	4-52	42.3- 100.0%	5-58											

* No.: number; Pt: patient; Med.: median; yrs: years; FND: focal neurologic deficit; AMS: altered mental status; SSS: superior sagittal sinus; St: straight sinus; Tr: transverse sinus; Sg: sigmoid sinus

* Blank cells represent data that was not reported

† Mean reported when median not available

‡ Gen: genetic prothrombotic states; Acq: acquired prothrombotic states; Ifc: infection; Ifl: inflammatory and autoimmune disease; Mlg: malignancy; Hem: hematology; Drg: drugs; Mec: mechanical causes; Oth: other causes; NKn: no known causes

- Genetic prothrombotic causes included: factor V Leiden mutation and mutations leading to homocysteinemia

- Acquired prothrombotic causes included: pregnancy, puerperium, and nephrotic syndrome

- Inflammatory and autoimmune disease included: ulcerative colitis and Sjogren's syndrome

- Hematologic causes included: polycythemia, severe anemia, and DVT history

- Drug-related causes included: oral contraceptives and smoking

- Mechanical causes included: head trauma and neurosurgical procedure

- Other causes included: dehydration and congenital heart disease

§ SSS was involved in 20 patients; Tr and/or Sg was involved simultaneously in 14 patients

¶ Poulsen et al. reported 9 patients treated endovascularly for CVST. Of these 9, 6 underwent mechanical thrombectomy, but demographic data regarding only these 6 could not be extracted from the study. Overall, 8/9 (88.9%) were female and mean age was 21.1 years. Risk factors included: genetic (1/9), infection (1/9), inflammatory/autoimmune disease (2/9), drugs (7/9), and mechanical (1/9). Headache was the presenting symptom in 8/9 cases, and mean symptom duration was 5 days. SSS was occluded in 5/9; St, in 4/9; and, Sg or Tr in 9/9.

S2: Summary of the mechanical thrombectomy techniques and adjuvant therapy for all 17 studies presented individually and pooled together.*

Authors & Year	No. Prior Anticoagulation	Thrombectomy Technique †	Chemical Thrombolysis ‡		Indication for Mechanical Thrombectomy §
			Bolus	Continuous	
Ma et al.[17] 2016	23/23 (100.0%)	Sol:23; ¶	0/23 (0.0%)	0/23 (0.0%)	(i) SAC failure
Mokin et al.[13] 2015	8/11 (72.7%)	Pen:9; Tre:1; Mer:1; Sol:3; Ang:1;	3/11 (27.3%)	3/11 (27.3%)	(i) SAC failure (ii) extensive clot burden
Zhen et al.[11] 2014	7/8 (87.5%)	Cth:7;	7/8 (87.5%)	7/8 (87.5%)	(i) SAC failure
Shui et al.[12] 2014	26/26 (100.0%)	BID:26;	0/26 (0.0%)	0/26 (0.0%)	(i) SAC failure
Siddiqui et al.[15] 2014		Pen:3; Mer:1; Ang:28; BID:2;	27/34 (79.4%)	25/34 (73.5%)	(i) SAC failure (ii) extensive clot burden (ii) large edema/infarct
Poulsen et al.[18] 2013		Cth:6;	6/6 (100.0%)	6/6 (100.0%)	(i) SAC failure
Mortimer et al.[19] 2013	8/9 (88.9%)	Pen:4; Cth:6;	8/9 (88.9%)	1/9 (11.1%)	(i) SAC failure
Li et al.[20] 2013	40/52 (76.9%)	Cth:52;	52/52 (100.0%)	17/52 (32.7%)	(i) SAC failure (ii) AMS presentation (ii) significantly elevated ICP
Jankowitz et al.[7] 2012	6/6 (100.0%)	Pen:1; Cth:5;	4/6 (66.7%)	0/6 (0.0%)	(i) SAC failure
Dashti et al.[6] 2011	13/13 (100.0%)	Ang:13;			
Choulakian et al.[5] 2010	1/4 (25.0%)	Pen:4;	0/4 (0.0%)	0/4 (0.0%)	(i) SAC failure
La Barge et al.[9] 2009	5/9 (55.6%)	BID:9;	1/9 (11.1%)	0/9 (0.0%)	(i) SAC failure/contraindication
Modi et al.[21] 2008	2/4 (50.0%)	Ang:4;			(i) SAC failure (ii) extensive clot burden
Zhang et al.[10] 2008		Ang:5; BID:1;	6/6 (100.0%)	0/6 (0.0%)	(i) SAC failure (ii) rapidly progressive symptoms (ii) AMS presentation
Tsai et al.[22] 2007	7/15 (46.7%)	BID:15;	14/15 (93.3%)	0/15 (0.0%)	(i) SAC failure (ii) rapidly progressive symptoms
Kirsch et al.[8] 2007	4/4 (100.0%)	Ang:4;	0/4 (0.0%)	0/4 (0.0%)	(i) SAC failure (ii) AMS presentation
Baker et al.[16] 2001	5/5 (100.0%)	Ang:5; BID:3;	4/5 (80.0%)	0/5 (0.0%)	(i) SAC failure (ii) local thrombolysis failure
Total	155/189 (82.0%)	Cth: 76 (32.3%) Ang: 60 (25.5%) Pen: 21 (8.9%) Mer: 2 (0.9%)	132/218 (60.6%)	59/218 (27.1%)	

Range	25.0-100.0%	BID: 56 (23.8%) Sol: 26 (11.1%)	Tre: 1 (0.4%)	0.0-100.0%	0.0-100.0%
-------	-------------	------------------------------------	---------------	------------	------------

* No.: number; SAC: systemic anticoagulation

* Blank cells represent data that was not reported

† Cth: catheter/guidewire-mediated clot maceration; BID: balloon-assisted thrombectomy; Ang: AngioJet; Sol: Solitaire stent retriever; Pen: Penumbra aspiration system; Mer: Merci retriever; Tre: Trevo stent retriever

† Includes both successful and unsuccessful attempts

‡ Duration of continuous drip thrombolysis into the involved sinus(es) in not reported in Mokin et al., 3-5 days in Zhen et al., 0.5-4 days in Siddiqui et al., 1-3 days in Poulsen et al., 0.7-4.25 days in Mortimer et al., and ≤ 1 hours in Li et al.

§ The Roman numerals (i) and (ii) represent different categories of indication for mechanical thrombectomy: (i) failure of medical therapy (ii) alarming patient presentation or symptomatic evolution

¶ 4 x 20 mm Solitaire AB stents used in SSS and 6 x 30 mm stents used in TrvS and SgS