Supplementary Method 2. Characteristics of the excluded studies following full text review

No.	Title	First author	Journal	Main reason for exclusion
1	Development of a kit to treat subarachnoid hemorrhage by intrathecal simple urokinase infusion (ITSUKI) therapy: preliminary results in patients with World Federation of Neurological Surgery (WFNS) grade V subarachnoid hemorrhage	Kai et al.	World Neurosurgery 2011	Inappropriate study design (case series).
2	Effectiveness of the head-shaking method combined with cisternal irrigation with urokinase in preventing cerebral vasospasm after subarachnoid hemorrhage	Kawamoto et al.	Journal of neurosurgery 2004	Therapeutic intervention in this article is not met to our inclusion criteria.
3	Stereotactic cisternal lavage therapy reduces delayed cerebral ischemia and improves outcome in patients with aneurysmal subarachnoid hemorrhage	Rölz et al.	Clinical Neuroradiology 2018	Therapeutic intervention in this article is not met to our inclusion criteria.
4	Intracisternal recombinant tissue plasminogen activator after aneurysmal subarachnoid hemorrhage	Findlay et al.	Journal of neurosurgery 1991	The control group is not presented.
5	Effect of intrathecal fibrinolytic therapy on clot lysis and vasospasm in patients with aneurysmal subarachnoid hemorrhage	Ohman et al.	Journal of neurosurgery 1991	The control group is not presented.
6	Phase I trial of tissue plasminogen activator for the prevention of vasospasm in patients with aneurysmal subarachnoid hemorrhage	Zabramski et al.	Journal of neurosurgery 1991	The control group is not presented.
7	A phase II clinical trial of recombinant human tissue-type plasminogen activator against cerebral vasospasm after aneurysmal subarachnoid hemorrhage	Sasaki et al.	Neurosurgery 1994	The control group is not presented.
8	Urokinase cisternal irrigation therapy for prevention of symptomatic vasospasm after aneurysmal subarachnoid hemorrhage: a study of urokinase concentration and the fibrinolytic system	Sasaki et al.	Stroke 2000	The control group is not presented.
9	Prevention of symptomatic vasospasm after aneurysmal subarachnoid hemorrhage by intraoperative cisternal fibrinolysis using tissue-type plasminogen activator combined with continuous cisternal drainage	Kinouchi et al.	Neurologia medico-chirurgica 2004	The control group is not presented.
10	Alteplase (rtPA) treatment of intraventricular hematoma (IVH): safety of an efficient methodological approach for rapid clot removal	Bartek et al.	Acta Neurochirurgica Supplement 2011	The control group is not presented.
11	Prospective study on the prevention of cerebral vasospasm by intrathecal fibrinolytic therapy with tissue-type plasminogen activator	Mizoi et al.	Journal of Neurosurgery 1993	Inappropriate study design (non-randomized).
12	Intraoperative use of rtPA for subarachnoid hemorrhage	Schmidt et al.	The West Virginia medical journal 1994	Inappropriate study design (retrospective study).
13	Prevention of delayed ischaemic deficits after aneurysmal subarachnoid haemorrhage by intrathecal bolus injection of tissue plasminogen activator (rTPA). A prospective study	Seifert et al.	Acta Neurochirurgica 1995	Inappropriate study design (non-randomized).
14	Vasospasm prevention with postoperative intrathecal thrombolytic therapy: a retrospective comparison of urokinase, tissue plasminogen activator, and cisternal drainage alone	Usui et al.	Neurosurgery 1994	Inappropriate study design (retrospective study).

Supplementary Method 2. Continued

No.	Title	First author	Journal	Main reason for exclusion
15	The efficacy of an intraoperative one-shot t-PA and irrigation for treating aneurysmal subarachnoid hemorrhage	Nakasu et al.	Japanese Journal of Neurosurgery 1996	Inappropriate study design (retrospective study).
16	Influence of intraoperative using of recombinant tissue plasminogen activator on the development of cerebral angiospasm after subarachnoid haemorrhage in patients with ruptured intracranial aneurysms	Gorski et al.	Neurologia i Neurochirurgia Polska 2000	Inappropriate study design (retrospective study).
17	Intraventricular hemorrhage after aneurysmal subarachnoid hemorrhage: pilot study of treatment with intraventricular tissue plasminogen activator	Varelas et al.	Neurosurgery 2005	Inappropriate study design (retrospective study).
18	The effect of lumboventricular lavage and simultaneous low-frequency head-motion therapy after severe subarachnoid hemorrhage: results of a single center prospective Phase II trial	Hänggi et al.	Journal of neurosurgery 2008	Inappropriate study design (non-randomized).
19	Effectiveness of combining continuous cerebrospinal drainage and intermittent intrathecal urokinase injection therapy in preventing symptomatic vasospasm following aneurysmal subarachnoid haemorrhage	Yamada et al.	British Journal of Neurosurgery 2008	Inappropriate study design (retrospective study).
20	Intraventricular tissue plasminogen activator for the prevention of vasospasm and hydrocephalus after aneurysmal subarachnoid hemorrhage	Ramakrishna et al.	Neurosurgery 2010	Inappropriate study design (retrospective study).
21	Surgical procedure and results of cisternal washing therapy for the prevention of cerebral vasospasm following SAH	Nakagomi et al.	Acta Neurochirurgica Supplement 2011	Inappropriate study design (retrospective study).
22	Intraventricular fibrinolysis has no effects on shunt dependency and functional outcome in endovascular-treated aneurysmal SAH	Gerner et al.	Neurocritical Care 2014	Inappropriate study design (retrospective study).
23	Combined cisternal drainage and intrathecal urokinase injection therapy for prevention of vasospasm in patients with aneurysmal subarachnoid hemorrhage	Moriyama et al.	Neurologia medico-chirurgica 1995	Non available full data regarding clinical outcomes, including vasospasm, hydrocephalus, mortality and functional outcome at 90 days.
24	A multimodal concept in patients after severe aneurysmal subarachnoid hemorrhage: Results of a controlled single centre prospective randomized multimodal phase I/II trial on cerebral vasospasm	Hänggi et al.	Zentralblatt für Neurochirurgie 2009	Non available full data regarding clinical outcomes, including vasospasm, hydrocephalus, mortality and functional outcome at 90 days.
25	Clot-clearance rate in the sylvian cistern is associated with the severity of cerebral vasospasm after subarachnoid hemorrhage	Toyoda et al.	Acta Neurochirurgica Supplement 2015	Non available full data regarding clinical outcomes, including vasospasm, hydrocephalus, mortality and functional outcome at 90 days.
26	Intrathecal fibrinolysis using recombinant tissue plasminogen activator (rTPA) for prevention of cerebral vasospasm and delayed ischaemic deficits after aneurysmal subarachnoid haemorrhage. Experimental and clinical data	Seifert et al.	Neurological Research 1994	Subgroup analysis of previous study and inappropriate study design (experimental study).

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