Perimesencephalic subarachnoid hemorrhage cerebral angiography

- Perimesencephalic Subarachnoid Hemorrhage Bleeding Patterns Are Not Always Benign: Prognostic Impact of an Aneurysmal Pathology
- Subarachnoid hemorrhage part 1 : Pathophysiology, diagnostics and special forms
- Benign versus sinister aetiologies underlying basal cistern subarachnoid haemorrhage: a case series
- Association of SSRI and SNRI use with incident hyponatremia after subarachnoid hemorrhage
- Transcarotid flow reversal for proximal control during cerebral aneurysm clip reconstruction: illustrative case
- Spontaneous disappearance of a small unruptured cerebral aneurysm in the clinoid segment of the internal carotid artery: A case report and literature review
- Follow-Up Imaging in Angiography-Negative Spontaneous Subarachnoid Hemorrhage
- Nonaneurysmal Perimesencephalic Subarachnoid Hemorrhage Associated with an Anomalous Anastomotic Cisternal Vein

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A survey aimed to evaluate the clinical management among neurosurgical departments in Germany. 135 neurosurgical departments in Germany. Indication for a second DSA is set in the majority of centers, whereas after two negative ones, a third DSA is less often indicated (2nd: 66.2%, 72.5%, 86.2%; 3rd: 3.8%, 3.8%, 13.8% minor, moderate, severe). This study confirms the influence of bleeding severity on treatment and follow-up of NASAH patients. Additionally, the existing inconsistency of treatment pathways throughout Germany is highlighted. Therefore, Wolfert et al. suggest to conceive new treatment guidelines including this finding [1)]

95% of cases have a normal cerebral angiography and the source of bleeding is not identified; the cause is thought to be a venous bleed. The other 5% of cases are due to a vertebrobasilar aneurysm and the prognosis is worse.

Undertaking a DSA after a negative CTA may not add any further diagnostic value in patients with PMSAH and may lead to net harm. This observation needs to be validated in a large-scale prospective multicenter study with complete case ascertainment and robust data on CTA and DSA complications [2)].

A repeat DSA is definitely not required in PM-SAH, but it should be done for all cases of nPM-SAH, before labeling them as nonaneurysmal SAH [3)].

1)

Wolfert C, Maurer CJ, Sommer B, Steininger K, Motov S, Bonk MN, Krauss P, Berlis A, Shiban E. Management of perimesencephalic nonaneurysmal subarachnoid hemorrhage: a national survey. Sci Rep. 2023 Aug 7;13(1):12805. doi: 10.1038/s41598-023-39195-2. PMID: 37550334; PMCID: PMC10406943.

2)

Mohan M, Islim A, Dulhanty L, Parry-Jones A, Patel H. CT angiogram negative perimesencephalic subarachnoid hemorrhage: is a subsequent DSA necessary? A systematic review. J Neurointerv Surg. 2019 Dec;11(12):1216-1221. doi: 10.1136/neurintsurg-2019-015051. Epub 2019 Jul 4. PMID: 31273072.

3)

Yeole U, Nagesh M, Shukla D, R AH, R PA. The Yield of Repeat Angiography in Angiography-Negative Spontaneous Subarachnoid Hemorrhage. J Neurosci Rural Pract. 2020 Oct;11(4):565-572. doi: 10.1055/s-0040-1714313. Epub 2020 Aug 11. PMID: 33144792; PMCID: PMC7595787.