

Could infraclinoidal aneurysm cause interdural hemorrhage

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Dear Editor,

We read the paper by Brock et al. [1] with great interest. They have treated the patient in a very good manner. Magnetic resonance imaging showed a thin blood collection all along the dural lining of the posterior dorsum sellae, clivus, and occipital bone down to the whole border of the foramen magnum. They reported that there was no blood collection in the subdural or subarachnoid spaces in the posterior fossa.

Their report supplied considerable data on clival hematomas, which are reported rarely. We would like to add some comments on their article. (1) We consider that the blood was not located in the interdural space, but in the subdural space of the clival region. The interdural space is located between the cerebral and periosteal dura mater layers [3], and constitutes the posterior part of the cavernous sinus, basilar plexus and inferior petrosal sinus structures at the petroclival region [2]. The cerebral and periosteal dural layers are attached to each other very firmly in the area without dural sinuses of the posterior fossa. Therefore, the blood collection at “the occipital bone down to the whole border of the foramen magnum” in their patient was not filling the interdural space, instead it was located in the subdural space. Because the blood escaped to the spinal compartment, they could not confirm any blood during surgery. (2) They had no cerebrospinal fluid (CSF) sample from their patient. If they had performed a lumbar puncture, they would have found

blood or red blood cells in the CSF. (3) If the bleeding was to the interdural space, there would be a possibility of caroticocavernous fistula development, which would be in a very unique location. If a hole developed between the internal carotid artery and interdural space, it is not easy to explain stopping of arterial pressure. (4) If there was a bridge from the internal carotid artery to the interdural space, as they described, after the internal carotid artery side was clipped, how can one be sure there will not be back-flow bleeding through the cavernous sinus side in the future? (5) If their idea was correct, why was there no venous space filling during the aneurysm exposure on the digital subtraction angiography? Preoperative angiography provides clear evidence that the bleeding did not involve the interdural space.

In conclusion, their report is a very nice example of clival subdural hematoma, even though it was reported as an interdural hematoma. The subdural space at the clival region has been schematized previously through an anatomical study [4].

Conflicts of interest None.

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