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Letter to Editor Open Access

Bleeding from an Aneurysm is not Arrested Immediately: Based on Findings on CT Angiography at an Acute Stage in Patients with Aneurysmal Subarachnoid Hemorrhage

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Description

There is an increasing number of articles of extravasation of contrast material from a ruptured aneurysm in patients with subarachnoid hemorrhage (SAH) during CT angiography (CTA) [1-16]. Most of authors regard this phenomenon as rerupture of aneurysm, probably because they believe that bleeding from a ruptured aneurysm is arrested immediately when the intracranial pressure is increased to the level of the systolic blood pressure [17]. In our observation, all patients with active bleeding were severe grade of SAH and all CTA in patients with active bleeding were obtained within 2 hours after symptoms of SAH [15]. We could observe re-rupture from an aneurysm by the extravasation of contrast material from the aneurysm on intra-arterial angiography in patients with marked changes in vital and neurological signs. We have encountered many patients with extravasation of contrast material during CTA without marked neurological deterioration, which may reflect the inclusion of patients with continuous bleeding, as seen with other systematic injuries. It is time to recognize that extravasation from an aneurysm on CTA does not always mean re-rupture and that bleeding from an aneurysm is not arrested immediately [8]. We should take this in mind and it might be advisable to wait at least a few hours after the onset of symptoms for invasive examinations, treatments, and even transfer to a stroke center in severe grade SAH patients [15].

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