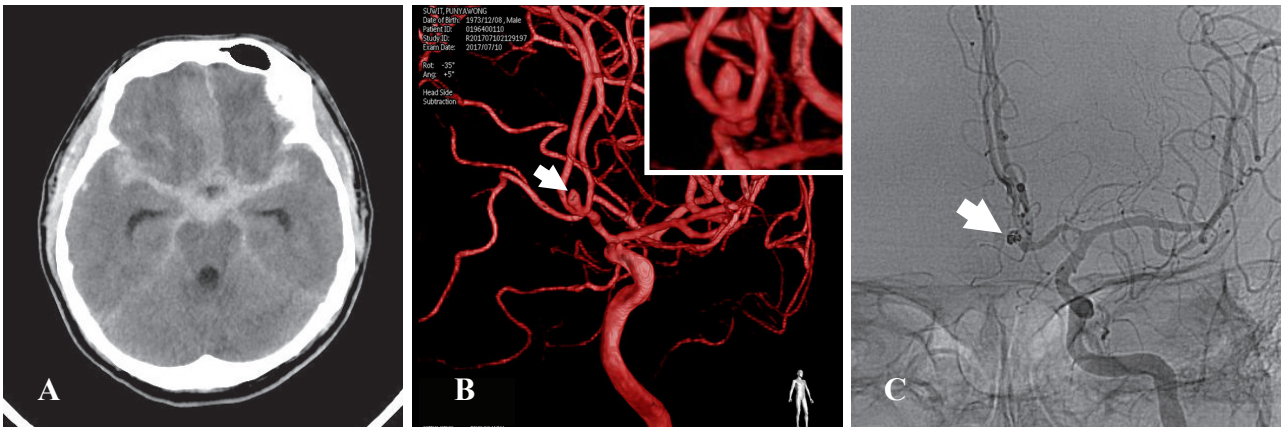
Successful Endovascular Coiling of Ruptured Anterior Communicating Aneurysm (aCom)

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A 43-year-old healthy man presents with a sudden severe headache during a weight lifting exercise. No underlying diabetes mellitus or hypertension known. He is a moderate alcoholic drinker and smoker. All laboratory findings are unremarkable except mild elevation of high density lipoprotein (HDL); 53 mg/dL), normal range is within 50 mg/dL. Computed tomography (CT) of brain without contrast enhancement reveals diffuse thick acute subarachnoidal hemorrhage along cisterns. Bilateral fronto-anterior temporal lobes edema is seen. Subfalcine herniation contralaterally shift leftward is remarked (see Figure A). Selective left internal carotid arteriogram reveals 2.4x2.5x3.9 mm saccular aneurysm at anterior communicating artery (aCom) with a 1.5 mm neck width. Three-dimensional (3D) reconstruction of intracranial artery before coiling is identified (see Figure B arrow). Endovascular coiling was performed with a 6F Softtip guiding catheter inserting to the tip at distal cervical portion of left intracranial internal carotid artery (ICA). Successful coiling using 2 microcoils (Target, Stryker), measuring 2mmx4cm and 1mmx1cm at the aneurismal site was performed (see Figure C arrow). In conjunction with an external ventricular drain, eventually he fully recovered without any neurological deficit. According to the Radiology Review Manual 7th edition[1] the rate of cases presenting with aneurysm of aCom at autopsy is 25% and by angiography with symptoms is 36% and the risk of bleeding is 70%. Ayman Z Ahmed et al.[2] analyzed 15 cases that underwent both microsurgical clipping and endovascular coiling. The rate of mortality after clipping is 26.7% and after coiling is 6.7%. According to the Glasgow Outcome Scale (GOS) at the 6 months follow up, Scale 5 is considered a good recovery in clipping (8 cases) and in coiling (9 cases). The recurrence rate of clipping is 0% and the coiling technique is 26.7%.

In conclusion, in a proper clinical setting, when compared to microsurgical clipping, endovascular coiling is preferable in the management of a ruptured aCom aneurysm as well as being less invasive and with a lower mortality incidence. This case is a sample case demonstrating the successful endovascular coiling of an aCom aneurysm without any neurological deficit.

References

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