

Small asymptomatic intracranial aneurysm - to intervene or not? - pro

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Unruptured intracranial aneurysms are present in up to 10% of the general population. The risk of rupture is low and the occurrence is 2-20 per 100,000 populations per year. The treatment of patients with an aneurysm-related subarachnoid haemorrhage (SAH) is undisputable, but treatment of asymptomatic aneurysms is still a matter of debate. Intracranial aneurysms apart from causing SAH can also cause several other neurological symptoms resulting from mass effect and also sentinel headaches. These can also be debilitating or increasing the risk of an SAH. The ISUIA trial showed that small unruptured aneurysms have a lower risk of bleeding and those located in the anterior circulation and less than 7mm are associated with a higher risk of intervention than rupture. Nevertheless the ISUIA trial was biased by the fact that it was a non-randomized, observational study where surgical or conservative management was left to the physician's discretion. The trial showed that all posterior circulation aneurysms and those found in patients with a previous SAH from another aneurysm should be considered for treatment regardless of size. More recent studies show that not only size is associated with rupture risk and subsequently with the indication for surgical treatment. These factors include: location (anterior and posterior communicating arteries), female gender, daughter sac and irregular morphology, aneurysm growth, increasing time from first diagnosis, Finnish or Japanese origin, hypertension, smoking, elderly age, earlier SAH from another aneurysm. All of the above together with family history of SAH should be considered before the decision for intervention.