Guideline

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European Stroke Organisation (ESO) guidelines on management of unruptured intracranial aneurysms

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Abstract

Unruptured intracranial aneurysms (UIA) occur in around 3% of the population. Important management questions concern if and how to perform preventive UIA occlusion; if, how and when to perform follow up imaging and non-interventional means to reduce the risk of rupture. Using the Standard Operational Procedure of ESO we prepared guidelines according to GRADE methodology. Since no completed randomised trials exist, we used interim analyses of trials, and meta-analyses of observational and case-control studies to provide recommendations to guide UIA management. All recommendations were based on very low evidence. We suggest preventive occlusion if the estimated 5-year rupture risk exceeds the risk of preventive treatment. In general, we cannot recommend endovascular over microsurgical treatment, but suggest flow diverting stents as option only when there are no other low-risk options for UIA repair. To detect UIA recurrence we suggest radiological follow up after occlusion. In patients who are initially observed, we suggest radiological monitoring to detect future UIA growth, smoking cessation, treatment of hypertension, but not treatment with statins or acetylsalicylic acid with the indication to reduce the risk of aneurysm rupture. Additionally, we formulated 15 expert-consensus statements. All experts suggest to assess UIA patients within a multidisciplinary setting (neurosurgery, neuroradiology and neurology) at centres consulting >100 UIA patients per year, to use a shared decision-making process based on the team recommendation and patient preferences, and to repair UIA only in centres performing the proposed treatment in >30 patients with (ruptured or unruptured) aneurysms per year per neurosurgeon or neurointerventionalist. These UIA guidelines provide contemporary recommendations and consensus statement on important aspects of UIA management until more robust data come available.

Keywords

Unruptured intracranial aneurysms, risk of rupture, coiling, clipping, endovascular repair, risk factors, medical management, aneurysm growth, grading of recommendations, assessment, management, guidelines

The full version of this guideline appears online. All guidelines can be found at https://journals.sagepub.com/topic/collections-eso/eso-1-guidelines/esoa

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