Leaving Tiny, Unruptured Intracranial Aneurysms Untreated. Why Is It So Hard?

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The author, from the University of Texas at Austin, explains why small unruptured aneurysms should remain untreated. Two decades of research, and a recent article in JAMA Neurology, confirm that very small aneurysms (defined as 3mm or smaller) do not require treatment, given that the rupture rate is estimated at only 0.23%, whereas coil embolization actually reduces the patient's life span by almost two years due to aneurysm rupture or stroke. Follow-up monitoring, regardless of imaging interval or associated costs, offers nothing except the potential for overdiagnosis and overtreatment. The author debunks all commonly used medical rationales for treating small aneurysms: treatment will allay patients’ anxiety (a concern that is obviated by proper patient education), the literature inflates treatment risks (in fact, adverse outcomes are typically underreported), all aneurysms eventually rupture (not supported by the evidence), and some of these small aneurysms have high-risk features (true, but not sufficient to increase rupture rates to a meaningful degree). Human biases also lead clinicians to treat small aneurysms, including optimism about likely treatment success, financial incentives to treat more cases (increase in salary or patient referrals), and the reluctance to abandon traditional teaching that unruptured aneurysms are tiny “time bombs” that must be eradicated. The author feels that established practice may change only with greater attention to the published evidence, provision of rewards for good outcomes instead of more care, multidisciplinary coordination of care, and tracking of patient outcomes.

4 references (clay.johnston@austin.utexas.edu – no reprints)

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EDITOR’S COMMENTARY: This was an editorial reviewing the management of tiny, unruptured intracranial aneurysms. The author describes that aneurysms < 3mm should not undergo intervention given that the rupture rate is estimated at 0.23%, while complications from treatment are greater than this rate. The author highlights several myths and counterpoints: treatment will allay patients’ anxiety (a concern that is obviated by proper patient education), the literature inflates treatment risks (in fact, adverse outcomes are typically underreported), all aneurysms eventually rupture (not supported by the evidence), and some of these small aneurysms have high-risk features (true, but not sufficient to increase rupture rates to a meaningful degree).