

SHOULD PATIENTS WITH UNRUPTURED AVM BE REFERRED FOR INTERVENTION: YES

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In recent population-based series, more than half of all detected AVMs are diagnosed without any clinical or radiological signs of acute or prior hemorrhage, but may have presented with seizures or recurrent headaches.

Ruthless neurologists claim that living with an unruptured brain AVM is safer as compared to the risk of interventional therapy.

Overwhelming experience from around the world, however, shows that surgical interventions for brain AVMs cannot be possibly dangerous, as neurosurgeons usually leave the operating theatre unharmed and without any deficit. Similar experience has been documented for endovascular procedures and stereotactic radiotherapy. Therefore, here is some advice to undeterred, active neurosurgeons, interventional neuroradiologists, and radiotherapists:

Neither your institution, nor your partner or family is likely to reject plans to increase income by treating young adult patients with an as yet unruptured brain AVM. According to a cost analysis from a New York City institution dating back a decade ago, expected institutional income may be \$30,000 for each embolization or radiotherapy session, and at least \$50,000 for surgical removal. Potential complications and side effects from any intervention may further increase the amount of money spent per case.

Your lawyer, however, may be unhappy to learn that you took on yet another unruptured brain AVM, as the expected risk of stroke and death following your intervention is five times higher as compared to the expected risk when leaving the patient untreated. Also, the likelihood of a neurological deficit with an impact on the patient's daily life is three-times higher after intervention. It is a welcome example justifying interventional procedures primarily by evident financial, rather than proven medical benefit. (Please use initials of the five paragraphs to get the spirit of the statement.)