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The Considerable Burden of Unruptured Intracranial Aneurysms in China

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Intracranial Aneurysms in China

In China, the incidence of disease has undergone a remarkable epidemiologic and demographic transition during the past three decades, resulting in cerebrovascular diseases emerging as the leading cause of mortality [1]. Although hypertension, the most important cause of cerebrovascular diseases, is well studied and controlled in China, the common use of CT and MR angiography has led to increasing identification of unruptured intracranial aneurysms (UIAs), the main cause of acute subarachnoid hemorrhage that is associated with high mortality. A cross-sectional study in China showed that the prevalence of UIAs is 7%, [2] which is much higher than the 1-2% observed in the general population worldwide [3]. Surgical clipping, endovascular coiling, and conservative management are the primary treatment strategies for UIAs. The clinical management of UIAs has greatly improved in the past several decades in China. However, UIAs have not received enough attention across the country, and have not been treated reasonably and economically, which could drastically increase the future healthcare burden in China.

Several problems exist regarding the current clinical management of UIAs in China. First, the number of UIAs detected is low compared to the high reported prevalence of this condition [2]. It is not reasonable to screen all patients for UIAs, but we should screen individuals at high risk, such as those with a family history of subarachnoid hemorrhage [3]. Second, clinical studies lag far behind clinical practice. In China, prospective studies on UIAs are rare. Guidelines for UIA management are primarily based on data from other countries; however, such guidelines may be not suitable for use in China because of differences, such as UIA rupture risk due to race disparities [4]. Third, there are considerable regional and personal disparities in UIA management, and multidisciplinary teams for UIA management are scarce. Fourth, many patients cannot afford the high cost of endovascular treatment of UIAs, which is inflated because the expensive neurointervention equipment largely depends on importing. However, endovascular coiling may be better than surgical clipping of UIAs in many aspects, such as a lower rate of neurological complications and shorter hospital stays [5]. Fifth, UIA treatment itself has the potential to cause morbidity and mortality. However, there is an unfortunate trend of violence against doctors in China, [6] which may reduce the willingness of clinicians to treat such patients.

Presently, urgent need to initiate prospective studies on UIAs and to produce and enforce evidence-based Chinese guidelines for the clinical management of UIAs. Nevertheless, Chinese companies should focus upon accelerated development of high-quality, economically viable neurointervention materials, and the production and use of such domestic materials should be encouraged. The Chinese government should capitalize on UIA screening, especially in rural areas and western China, build a strict access system for neurosurgeons to implement multidisciplinary teams for UIA management, and create a harmonious environment among doctors and patients, where doctors can treat their patients without fear or violence.

Fortunately, China's Cabinet has initiated clinician training reform to improve the abilities of specialists, including neurosurgeons, [7] and has recently passed laws to tackle violence against doctors [8]. We look forward to a healthy medical system in China that can manage such serious problems.

Contributors

WJJ, YXL, and ZXW were involved in the design of the study. WJJ and AHL searched the literature and collected data. WJJ drafted the paper, and all authors critically revised the manuscript.

Conflicts of interest

We declare that we have no conflict of interest. The corresponding author confirmed that he had full access to all the data in the study and had final responsibility for the decision to submit for publication.

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