



Infundibula Evolution into Cerebral Aneurysms; Literature review and hemorrhage Risk

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Introduction

Infundibula occur at branches within the intracranial circulation, classically at the internal carotid and posterior communicating arterial junction. Although typically considered a benign finding, some clinicians suggest that this, may be in certain patients, a pre-aneurysmal finding. Reports exist within the literature that describe the evolution of an infundibulum into a true aneurysm at the p-com branch points. Additionally, there have been reports of infundibular hemorrhage without evolution into true aneurysm. The purpose of this series is to review the infrequent evolution of this typically benign finding into an aneurysm; and design a prospective classification system that might assist clinicians in the management of this classically benign finding.

Methods

Scientific literature review of PubMed (National Library of Medicine) from January, 1966 through January, 2014 of material relevant to evolution of infundibula into true aneurysms. Various combinations of key words including infundulum, cerebral aneurysm, denovo aneurysm were used.

Results

Fourteen cases were found that support the theory that infundibula can evolve into true aneurysms. They are more likely to do so in the presence of additional aneurysms, especially if those aneurysms resulted in subarachnoid hemorrhage (SAH). Other risk factors of evolution may be related to wall defects and sheer stress. In an additional six reported cases of infundibular rupture without evolution into a true aneurysm, wall defects may play a more significant role.

Conclusions

Some infundibula are potentially pre-aneurysmal in nature and follow-up may be considered when the patient exhibits certain risk factors, including the presence of additional aneurysms or previous SAH.

Learning Objectives

1. Understand the benign nature of infundibulae and their natural history.
2. Appreciate the rare instance where a patient may be at higher risk of hemorrhage.

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