

Contemporary Endovascular And Open Aneurysm Treatment In The Era Of Flow Diversion

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Clinical outcomes have improved considerably over the last decade for patients with ruptured and unruptured aneurysms. Modern endovascular techniques, such as flow diversion, are associated with high aneurysm occlusion rates and have become a popular treatment modality for many types of aneurysms. However, the safety and effectiveness of flow diversion has not yet been established in trials comparing it with traditional aneurysm treatments. Moreover, there are some types of aneurysms that may not be appropriate for endovascular coiling, such as wide-necked aneurysms located at branch points of major vessels, large saccular aneurysms with multiple efferent arteries, dolichoectatic aneurysms, large aneurysms with mass effect, when there are technical complications with endovascular treatment, when patients cannot tolerate or have contraindications to antiplatelet therapy or in the setting of a subarachnoid hemorrhage. For these cases, open cerebrovascular surgery remains important. This review provides a discussion on the current trends and evidence for both flow diversion and open cerebrovascular surgery for complex aneurysms that may not be suitable for coiling. We emphasize a continued important role for open surgical treatment in certain situations.