



Hybrid Operating Room for the Treatment of Complex Neurovascular Lesions: A Single Center Experience of 47 Cases

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Introduction

The purpose of this study is to analyze our experience in the treatment of complex neurovascular lesions in the hybrid operating room.

Methods

A total of 47 patients with complex neurovascular lesions underwent combined intraoperative endovascular and surgical procedures in our hybrid operating room. There were 21 cases of intracranial aneurysms, 19 cases of carotid artery stenosis, 5 case of AVMs.4 cases of moyamoya disease, and 2 cases of dural arteriovenous fistulae.

Results

All enrolled patients underwent two types of hybrid operations. Of them, 28 patients underwent combined intraoperative DSA evaluation and 19 patients underwent intraoperative interventional embolization and surgical procedures. Of the 21 patients with aneurysms, 16 patients had large or giant aneurysms, 12 patients treated by clipping and interventional embolization (including 4 cases underwent surgical rescue after endovascular complications), and 9 patients received aneurysms clipping under intraoperative DSA. There were no aneurysms residual and one patient died from the rupture of aneurysm during interventional embolization. For patients with carotid artery stenosis, combined CEA and CAS were performed. Of the 5 patients with AVM, total resection of AVM was completed using intraoperative interventional embolization. Intraoperative DSA was applied to evaluate the patency of bypass vascular in patients with moyamoya disease. No patients suffered from new postoperative neurologic deficits.

Conclusions

The integration of interventional embolization or DSA and surgical approach in a hybrid operating room provides a new strategy for the

Learning Objectives

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References