

Hybrid Operation in Treating Complex Intracranial Aneurysms

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Introduction

Complex intracerebral aneurysms(cIAs) are imperative to be excluded out of circulation system due to their high rupture risk. Suboptimum prognosis and aneurysmal remnants are common outcomes of cIAs . hybrid operation is an ingenious combination of the advantage in both microsurgical and endovascular therapies in treating cIAs.

Methods

cIAs patients who was admitted in Beijing Tiantan hospital and underwent hybrid operations between Dec, 2015 and Dec, 2016 were registered in our research. General information, features of aneurysms, details of operations, perioperative estimation and outcomes were recorded.

Results

56 patients (male: female=16:40) were included harboring 70 aneurysms. Ages arranging from 32 to 69 years old (mean 55.3±8.8y). Majority of the cIAs located in internal carotid artery (n=51) with an average diameter of 13.27±10.66mm (2.34-60.00mm). 6 types of procedures were performed. Parental arterial balloon occlusion(n=28) and coinstantaneous coiling embolization(n=6) were the most conventional usage of endovascular techniques in hybrid operation. 2 cases of neurysmal remnant, 2 hemorrhagic and 11 ischemic stroke occured. 32.1%(n=18) got mRSa reduced when discharge, while 26.8%(n=15) got increased.

Conclusions

Hybrid operation is a novel, efficient and relatively secure method to manage cIAs. The procedure patterns got enriched due to the combination of microsurgical and endovascular techniques. The indicating population expended to those who could never be cured before. Meanwhile, procedure routine and technical process should be optimized furthermore to reduce the incidence of operation-related complications and mortalities.

Learning Objectives

By the conclusion of this session, participants should be enlightened about the novel surgical therapeutic technique towards complex intracranial aneurysms, and be encouraged to have a further exploration of it.

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