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Introduction

The aim of this study was to retrospectively analyze our experience with the patients who underwent surgical treatment of fetal posterior cerebral artery (fPCA) aneurysms and analyze the risk factors for the outcome.

Methods

From 2011 to 2016, we retrospectively reviewed 47 fPCA aneurysms in terms of the clinical and radiological features, and obtained the follow-up data. The relationships between these features and follow-up data were assessed with multivariate analysis.

Results

During a 5-year period, 47 aneurysms were occurring at the origin of fPCAs. There were 37 women (78.7%) and ten men (21.3%). Comparing with 263 posterior communicating artery (PcomA) aneurysms during the same period, the age of fPCA aneurysm patients was older (P = 0.037). The mean size of aneurysms was 7.5mm. All the patients showed complete obliterations of their aneurysms and having preservation of fPCA. Postoperative radiological infarction occurred in 10 patients. Larger aneurysm size was the strong independent predictive factor for radiological infarction, bad GOS score at discharge time and 6-month. Partial fPCA was more likely to result in bad GOS score at discharge (P = 0.057).

Conclusions

In conclusion, we report a series of patients harboring aneurysms originating from the fPCA. Surgical clipping is a reliable strategy. The aneurysm size is revealed to be a strong independent predictor for postsurgical infarction and prognosis, and partial fPCA type is a potential predictor for bad prognosis at discharge time.

Learning Objectives

1. Surgical clipping is a reliable strategy for fPCA aneurysms treatment.

2. The aneurysm size is revealed to be a strong independent predictor for postsurgical infarction and prognosis;

3. Partial fPCA type is a potential predictor for bad prognosis at discharge time.

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