

Introduction

Posterior circulation aneurysms have potential for high morbidity and mortality. As the endovascular technique is developed its role in the treatment of posterior circulation aneurysm is gradually increasing. The purpose of this study is to review the outcomes with surgical and endovascular treatment for posterior circulation aneurysms.

Methods

From 2000 to 2015, total 657 posterior circulation aneurysms in 656 patients were treated in our center. Of this aneurysms, 242 was ruptured and 419 were unruptured. A total of 177 aneurysms were treated with surgical clipping (72 ruptured, 105 unruptured) and 480 aneurysms were treated with endovascular coiling (170 ruptured, 310 unruptured). Basilar tip was most common site (surgical clipping for 75, endovascular coiling 211). Treatment outcome was assessed clinically and radiographically. Clinical outcome was assessed using modified Rankin scale and occur of complications.

Results

Surgical treatment resulted in 11.8% of post op complication occurred , 99.4% complete aneurysm occlusion and 0.06% with residual aneurysms after surgical treatment. Endovascular treatment resulted in 8.1% of post op complication occurred, 73.8% complete aneurysm occlusion, and 8.1% required additional coiling for the residual aneurysms. Aborted surgical treatment was 1 case, whereas aborted endovascular treatment was 11 cases. Overall clinical outcomes at 6 months follow up were mean mRS was 1.7 in the surgical treatment group and 1.6 in endovascular treatment group. (difference 0.1; 95% CI:-1.26, 1.46, P=.87).

Conclusions

In this study , both surgery and endovascular treatment was good option for posterior circulation aneurysm. Treatment modality should be chosen considering the patient's clinical grade at presentation, size and the location of the aneurysms.

Learning Objectives

Describe the importance of selection of the treatment modality for posterior circulation aneurysms.