



Watchdog catheter technique in the endovascular management of anterior communicating artery aneurysms

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Introduction

Direct coiling of anterior communicating artery aneurysms is done on a regular basis as is stent assisted coiling. The status of the contralateral anterior cerebral artery both proximally and distally in terms of patency is often difficult to evaluate from a unilateral injection. We describe the use of a “watchdog” catheter placed in the contralateral common or internal carotid artery preferably that can be used to periodically check flow during and after endovascular treatment of the aneurysm.

Methods

After internal review board approval was obtained, a retrospective review of the prospectively maintained aneurysm database from 2007- 2014 was performed.

Results

A total of 106 anterior communicating artery aneurysms were treated. We identified 14 patients where a ‘watchdog’ catheter was used in the treatment. There were 7 males and 7 females with an average age of 66 years. A stent was used as an adjunctive device in 3 cases. The watch dog catheter we used was a narrow caliber catheter, namely a 4 Fr Berenstein catheter. The average size of the treated aneurysm was 6 mm. No complication such as hematoma or dissection was noted on the contralateral common femoral artery groin access site. We did not encounter any thromboembolic complications from our watchdog catheter in the contralateral carotid artery. Both A1 and A2 segment patency was maintained through the procedures.

Conclusions

The watchdog catheter described in this report can be used to obtain an excellent baseline of flow and also to compare flow as aneurysm treatment proceeds.

Learning Objectives

This paper demonstrates a new technique to minimize complications during coiling of anterior communicating artery aneurysms.

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