Posterior Communicating Artery (PCOM) Aneurysm Presenting with Occulomotor Nerve Palsy (ONP): A Guide to Managment and Follow-up

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Introduction

The posterior communicating (PCOM) aneurysm has an anatomical relationship with the occulomotor nerve. Hence, it is a cause of occulomotor palsy (ONP). This is not an uncommon presentation and therefore detailed knowledge is essential.

This study provides the largest case-series to increase knowledge and guide long-term follow-up.

Methods

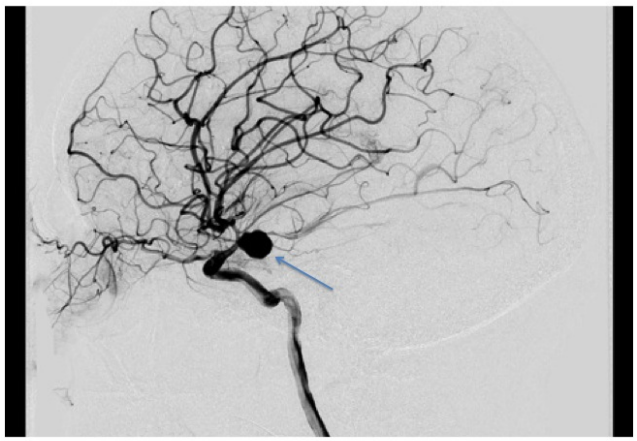
In a neurosurgical department covering a population of 3-4 million, data was collected for a 3-years (March 2010-March 2013).

A diagnosis of ONP was positive in cranial nerve exam (with or without pain). Patients were managed by surgical clipping, endovascular coiling or no input required.

Resolution was recorded at discharge and structured follow-up: For coiling (3-month telephone call and 6-month MRA), for clipping (3-month consultant clinic and 6-month cerebral angiogram).

Progress was assessed by examination and subjective assessment.
Outcomes were recorded as complete or partial resolution or unchanged.

Angiogram of PCOM Aneurysm



Presentation of ONP with PCOM Aneurysm

Results

In 3-years, 91 patients presented with PCOM aneurysms (20% presented unruptured) 73f:18m, 48L:43R, average size was 6.0mm. ONP in 19 (21%). There was no correlation with age, sex, side, size.

Management was clipping in 20 (22%), coiling in 63 (69%). No management required = 8 (8%), 3-deaths prior to neurosurgical intervention.

Of the ONP (p=19), all were either coiled or clipped. 9 resolved fully, 4 partial (by 6-months). Of the 4 patients that received PCOM clipping, 3 had full resolution of symptpoms prior to discharge (1 resolved at 6-months). Of the 15 patients that were coiled; 6 completely resolved pre-discharge and 3-partially resolved by 6-months.

Conclusions

The incidence of ONP with PCOM aneurysm is 21%.

Patients with life-restricting ONP should receive higher consideration of surgical clipping because the data suggests that 40% show no symptom improvement with endovascular coiling.

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