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EDITORIAL

# Approach to the anterior circulation aneurysms: does perfect head position matter?

## Abordagem aos aneurismas de circulação anterior: a perfeita posição da cabeça importa?

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Anterior circulation aneurysms (ACA) arise from the internal carotid artery or from any of its branches; the most common type is saccular, responsible for 85% of ACA. Microsurgery and endovascular approach are the two ways for treatment in these patients.

Prevalence of intracranial aneurysms is estimated to be from 1% to 5% of population, most of them are small and located in the anterior circulation[1,2]. The risk factors for aneurysms are age, female gender, smoking, arterial hypertension, alcohol abuse, presence of one or more relatives with subarachnoid hemorrhage and autosomal dominant polycystic kidney disease[1]. The ACA have lower risk of rupture than posterior location[3]. The risk of rupture is around 1% per year, size is the major risk factor for this complication, the rupture rate for ACA less than 7 mm was 0% per year in patients with no prior SAH and 0.3% per year in previous SAH, this risk arise considerably to 8% per year in patients with giant aneurysms[1]. Among ACA the most frequent site is anterior communicating artery[4]. The development and improvement of surgical and endovascular techniques are a constant requirement.

In this elegant study entitled "Head Positioning for Anterior Circulation Aneurysms Microsurgery", Chaddad-Neto et al. observed that a perfect head positioning, according to specific aneurysm location and results from cadaveric studies, offers a best option to minimize neurovascular injury and brain retractions[5].

They have proposed a perfect positioning after their study in heads that have been placed at the ideal rotation and extension for the best exposure to aneurysms of the anterior circulation. The second part of the study was made with 110 patients with unruptured aneurysm in anterior circulation, observing the best head positioning showed in the first part (cadaveric study).

Previous studies have adopted the classical pterional incision, but without a definition of adequate rotation and extension of the head to explore the better way to reach aneurysm of these regions[6,7,8,9]. Another way is using lateral supraorbital approach, more frontally located modification of the pterional approach[10]. A recent study has showed that for anterior communicating artery aneurysm there are different surgical approaches in relation to head rotation, according to anterior, posterior, superior and inferior projection[11].

This issue describes robust results from a significant number of patients (n=110) and permits a useful guide to be followed with the perfect positioning and description of the external and internal anatomic landmarks for a better visualization of aneurysms. Readers can observe differences and description among head positions (rotation and extension) for different sites (ophthalmic artery, anterior and posterior communicating arteries, anterior choroidal artery, internal carotid artery bifurcation, and middle cerebral artery). The authors have divided aneurysm locations into two groups, which simplified the positioning of the patient.

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