

Introduction

Presurgical embolization of meningiomas was first described in 1973 by Manelfe et al. There are great discrepancies in this respect and the current scientific evidence is poor.

Methods

We retrospectively reviewed supratentorial meningiomas greater than 4cm, intervened in our center between 2002-2015. We found 28 embolized meningiomas and 54 non-embolized meningiomas of similar size and location. All of them presented an irrigation that depended on more than 50% of the external carotid artery.

Embolization was carried out by ultraselective catheterization with microspheres (500-700 μ) with the patient awake and surgery was performed 24-48 hours after.

Results

The mean age was lower in the embolized patients (E) compared to the non-embolized patients (E) ($p = 0.027$). We did not find statistically significant differences in terms of location, size ($p = 0.065$), preoperative neurological examination, degree of resection, mean stay or complications between both groups.

The surgical time was lower in the case of embolized meningiomas ($p = 0.091$). The percentage of embolized patients who needed positive inotropic drugs during surgery was lower ($p = 0.102$) and the volume of transfusion was lower in the embolized cases, too ($p = 0.471$).

The difference between the scores on the Canadian scale between discharge and admission was higher in the case of embolized patients versus non-embolized patients ($p = 0.003$).

Conclusions

Pre-surgical embolization may be beneficial in certain supratentorial meningiomas larger than 4 centimeters.

References

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Learning Objectives

Indications and benefits of

Preoperative embolization of a convexity meningioma



Fig.1