

Middle meningeal artery embolisation in the treatment of chronic subdural haematoma[☆]



Embolización de la arteria meníngea media en el tratamiento del hematoma subdural crónico

Dear Editor:

We read with interest the manuscript “Endovascular embolisation of the middle meningeal artery to treat chronic subdural haematomas: effectiveness, safety, and the current controversy. A systematic review,” recently published in *Neurología*.¹ We would like to comment on the article based on our experience in the diagnosis and treatment of chronic subdural haematoma (CSH).^{2,3}

Firstly, the article gives the impression that middle meningeal artery (MMA) embolisation is frequently performed to treat CSH, whereas this is in fact an exceptional procedure that has not been validated to date by any study with a high level of evidence; therefore, huge controversy surrounds its true usefulness. The aim of embolisation is to eliminate blood supply to the internal membrane of the haematoma through neoformed microvessels, which generate microbleeds to a bordering space between the arachnoid mater and the dura mater, known as the dural border cell layer. This layer is of reduced thickness, and due to the effect of bleeding and the lack of collagen it may open into 2 walls that are liable to separate, facilitating blood accumulation.⁴

In our opinion, the series published, none of which are prospective or randomised, provide insufficient data and evidence to establish routine performance of this technique in neurosurgery departments. The use of MMA embolisation reported in the published series is far from comparable to the current gold standard for the treatment of CSH: burr-hole, washing out, and external drain.⁵ Most publications do not provide enough information on the type of patients treated. It would be relevant to specify the presence of widely known prognostic factors in CSH, such as clinical status (assessed with the Glasgow Coma Scale or the Markwalder Grading Scale), the internal structure of the haematoma (assessed by CT studies), etc.

We do not agree that MMA embolisation is an appropriate technique for the primary treatment of patients presenting high risk for surgery and general sedation, or that endovascular therapy may be performed under light sedation, decreasing anaesthetic risk.¹ Local anaesthesia was used in 91.1% of cases in our series of 1000 patients with

CSH treated with burr-hole, washing out, and drain, and in 88.5% of cases in our series with 200 elderly patients (> 85 years), with no need to modify the anaesthesia used due to the comorbidities of the patients.

Finally, we agree with the authors that MMA embolisation may be used safely in cases of recurrent CSH or as first option in patients with limited brain shift and good clinical status, since the technique, unlike surgery, takes some time to reduce the haematoma and to resolve compression and brain shift.

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