

8. Santarius T, Kirkpatrick PJ, Ganesan D, Chia HL, Smielewski P, Richards HK, et al. Use of drains versus no drains after burr-hole evacuation of chronic subdural hematoma: a randomised controlled trial. *Lancet*. 2009;374:1067–73.

M. Gelabert González\*, D. Castro Bouzas,  
R. Serramito García

*Servicio de Neurocirugía, Hospital Clínico Universitario de Santiago de Compostela, Departamento de Cirugía,*

*Universidad de Santiago de Compostela, Santiago de Compostela, Spain*

\* Corresponding author.

*E-mail address:* miguel.gelabert@usc.es  
(M. Gelabert González).

doi:10.1016/j.nrleng.2011.10.004

## Minimally invasive treatment of chronic subdural haematoma in adults. Results in 116 patients. Response by the authors<sup>☆</sup>

### Tratamiento mínimamente invasivo del hematoma subdural crónico del adulto. Resultados en 116 pacientes. Respuesta de los autores

*Dear Editor:*

After reading our colleagues' Letter to the Editor, we would like to make some necessary clarifications.

We are well aware that a chronic subdural haematoma may be defined by its progression timeline, and that a certain percentage of cases may present mixed or isodense images. However, our study only included patients whose imaging studies showed typical signs of subdural (hypodense) or multiloculated haematomas. This is because the aspiration technique can only be used if the process of fibrinolysis has already taken place in the haematoma, and blood clots have therefore been liquefied.<sup>1</sup> In fact, studies of minimally invasive techniques show that this technique is more effective in patients with hypodense images.<sup>2</sup>

The technique described as trans-marrow puncture (TMP) is minimally invasive and very similar to the twist-drill technique. However, TMP uses a catheter over a 14-gauge (1.63 mm) sterile needle. It does not require use of a drill.

With regard to the mortality analysis, our intent was to describe overall mortality in the series, which is why we included all 127 patients. After considering the comment, we have decided to calculate mortality rates in only those patients who underwent TMP. The in-hospital mortality rate for patients undergoing TMP was 4.3% (5/116), with a 6-month mortality rate of 12% (14/116).

With regard to the failure rate, we should clarify our definitions. From our perspective, failure of the technique

included the need to resort to more invasive techniques such as burr holes or craniotomy (17% in our series). As stated in the original article, the need for multiple punctures does not entail increased risk or complications for the patient. It would be appropriate to mention "incomplete drainage" for patients whose condition did not resolve with the first TMP.

Regarding the treatment, we reiterate that a prospective randomised study is needed in order to determine which technique is optimal. Although the literature contains numerous articles that support burr holes as the first treatment option, there are also other options that may be selected as initial techniques depending on the patient's characteristics, age, and comorbidities, and on the neurosurgeon's level of experience.

In conclusion, our intent was to describe our experience and point out that, in the absence of class I or II studies to determine which is the best initial treatment, TMP is yet another option for elderly patients with multiple comorbidities.

## References

1. Nakaguchi H, Tanishima T, Yoshimasu N. Factors in the natural history of chronic subdural hematomas that influence their post-operative recurrence. *J Neurosurg*. 2001;95:256–62.
2. Kenning TJ, Dalfino JC, German JW, Drazin D, Adamo MA. Analysis of the subdural evacuating port system for the treatment of subacute and chronic subdural hematomas. *J Neurosurg*. 2010;113:1004–10.

M.F. Latini<sup>a,\*</sup>, C.A. Fiore<sup>a</sup>, L.M. Romano<sup>a</sup>, E. Spadaro<sup>a</sup>,  
J.P. Zorrilla<sup>a</sup>, S.E. Gonorazky<sup>a</sup>, M. Gaspari<sup>b</sup>, J.A. Villegas<sup>b</sup>

<sup>a</sup> *Servicio de Neurología, Hospital Privado de Comunidad, Mar del Plata, Argentina*

<sup>b</sup> *Servicio de Neurocirugía, Hospital Privado de Comunidad, Mar del Plata, Argentina*

\* Corresponding author.

*E-mail address:* latini\_facundo@yahoo.com.ar (M.F. Latini).

doi:10.1016/j.nrleng.2011.12.009

<sup>☆</sup> Please cite this article as: Latini MF, et al. Tratamiento mínimamente invasivo del hematoma subdural crónico del adulto. Resultados en 116 pacientes. Respuesta de los autores. *Neurología*. 2012;27:312.