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## Mechanical thrombectomy in acute ischemic stroke, knowing our results<sup>☆</sup>



### Trombectomía mecánica en el ictus isquémico agudo, conociendo nuestros resultados

Dear Editor,

After reading with interest the article recently published on *Medicina Intensiva* by Viña-Soria et al.<sup>1</sup> "Results and functional outcomes of acute ischemic stroke patients who underwent mechanical thrombectomy" ("Resultados y evolución funcional de pacientes críticos con ictus isquémico sometidos a trombectomía mecánica" in Spanish), we would like to make a few contributions here.

This paper shows the outcomes of a pioneering unit in Spain where they have been prescribing endovascular treatment (EVT) to treat acute ischemic stroke patients for quite a few years. This therapy that has recently proven superior to therapy with systemic fibrinolysis only.<sup>2</sup>

Intensivists play a fundamental role in the management of neuro-critically ill patients and, in our opinion, they should be part of the management and decision-making process regarding therapy.

The series published by Viña-Soria et al. includes a one-year follow-up of 60 patients with stroke plus an indication for EVT admitted to our intensive care unit (ICU) from 2012 through 2014 (29% of the total number of patients treated according to the applicable criteria); patients in poor neurological condition and/or needing support therapy at the discretion of the treating neurologist. A priori this may seem like a limitation to extrapolate these outcomes to the clinical practice given the lack of a specific inclusion criterion.

The management of this condition is evolving rapidly with constant updates of clinical guidelines – the most recent ones published back in January 2018.<sup>3</sup> The actual indication for EVT (up to 24h after symptom onset) is significantly less strict than the one shown in this series. On the other hand, fibrinolysis should be prescribed as long as it has an indication and only if it does not delay the implementation of the EVT and without having to wait for the patient's clinical response. Recent studies suggest

the benefits of combined therapy showing a higher percentage of good functional outcomes, fewer complications and lower mortality rates.<sup>4</sup> As a matter of fact, the study conducted by Viña-Soria et al. shows a low rate of fibrinolysis compared to other studies published on this regard.

Our ICU provides care to all patients with strokes who are eligible for reperfusion. In a series analyzed from December 2016 through December 2017, 206 patients were admitted to the ICU: 42% (86 patients) received fibrinolysis, 23% (47 patients) combined therapy, and 35% (73 patients) underwent thrombectomy procedures only. As the outcomes published by Viña-Soria show, patients treated with EVT experience better clinical and functional improvement. In our series, functional improvement in the group of patients who received combined therapy was particularly remarkable compared to the group of patients who received thrombectomy only, mRS  $\leq 2$  of 52% in the former group versus 27% in the second group, and a lower mortality rate 4% versus 15%, respectively. These findings are consistent with the aforementioned studies.<sup>5</sup>

In our opinion, the data published are valuable, especially including a one-year follow-up, yet they could be more useful if they showed the global outcomes of all patients treated with EVT and if these outcomes actually vary compared to patients treated according to the new recommendations. It would be interesting to conduct one multicenter study with a sample large enough to be able to draw conclusions on the managements and outcomes of strokes treated with EVT.

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## In reply to ‘‘Mechanical thrombectomy in acute ischemic stroke, knowing our results’’<sup>☆</sup>



### En respuesta a «Trombectomía mecánica en el ictus isquémico agudo, conociendo nuestros resultados»

Dear Editor,

We wish to thank the authors for their interest and comments on our paper ‘‘Results and functional outcomes of acute ischemic stroke patients who underwent mechanical thrombectomy’’ (‘‘*Resultados y evolución funcional de pacientes críticos con ictus isquémico sometidos a trombectomía mecánica*’’ in Spanish), and would like to make a few comments too:

We completely share the authors’ view in their letter on the importance of intensive care units (ICU) and intensivists in the good management of neuro-critically ill patients. As intensivists we should always keep a proactive attitude during the hospital admission of patients with strokes. And not only with the most critically ill patients who require the full support ICUs can provide, but also with patients who are not so critical, in whose referring hospitals there are no stroke units, but could achieve better functional outcomes with good management of the neuro-physiological variables. Taking into consideration that cerebrovascular disease is one of the leading causes of mortality and disability, its management should be multidisciplinary (neurology, interventional neuro-radiology and neurosurgery), which poses an interesting challenge for healthcare today.

There is no doubt about it. The management of ischemic strokes has evolved during the last few years and so has our team from early IV-only fibrinolysis to intra-arterial fibrinolysis,<sup>1</sup> endovascular treatment (EVT) and combined therapies. The comment that the actual indication for EVT is up to 24 h after symptom onset is less strict than the indication of our series is right too. We have been expanding the

window of opportunity to implement EVT, but we shouldn’t forget that our study patients date back to 2012–2014 and were under more restrictive criteria on the implementation of EVT.

It is also true that the low rate of patients with systemic fibrinolysis of our series is actually lower than that of other studies published, but we should remember that it was a cohort biased towards more clinical severity and, therefore, more proximal arterial occlusions. We have been prescribing alteplase to patients with acute strokes for nearly 20 years and we know that its effects are scarce<sup>2</sup> and that the use of mechanical thrombectomy in these patients has better outcomes. In our hospital, interventional neuro-radiologists on call have a very fast response. That is why in this subgroup of patients we normally omit the previous step of IV fibrinolysis in the light of the immediate availability of this option and how time-consuming it is in patients who won’t probably have an effective response. On the other hand, the superiority of combined therapies has been put into question by some recent studies.<sup>3,4</sup>

We wish to congratulate the authors for their experience and good outcomes. Also, we agree on the need to conduct multicenter studies to know more on the outcomes of endovascular treatment. Our hospital will soon participate in the international multicenter randomized trial SWIFT DIRECT<sup>5</sup> that will be comparing the clinical outcomes between two therapeutic strategies: EVT and EVT plus IV fibrinolysis.

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<sup>☆</sup> Please cite this article as: Viña Soria L, Escudero Augusto D, Calleja Puerta S, Vega Valdés P, López Amor L, Martín Iglesias L. En respuesta a «Trombectomía mecánica en el ictus isquémico agudo, conociendo nuestros resultados». *Med Intensiva*. 2019;43:188–189.