

SMART: The saline was always on the tightrope[☆]



SMART: El suero salino siempre estuvo en la cuerda floja

Dear Editor:

We read with great interest the recently published SMART study as well as González-Castro et al.'s letter about it.¹ New studies published have started the debate on fluid therapy and several of our practices have been put into question. The clearest message here is that the type of fluid used, the patient's progression of the disease, and the dose used have prognostic significance. Nowadays, no one doubts whether fluids are actual drugs or not. The second conclusion we can draw is that when it comes to fluid therapy the decision-making process is not always a rational one.² Thus, after the negative results obtained by colloids, there has been an exponential increase in the use of low chloride crystalloids (balanced).³ In this sense, the authors of the letter speak of saline solutions as being on the tightrope. We should say here that until a few months the only evidence that advocated for these saline solutions was coming from observational studies. Thus, the SMART study is the very first randomized clinical trial with critically ill patients that showed positive results with the use of balanced solutions. The authors of the study used the MAKE composite endpoint (all-cause mortality, renal replacement or renal failure). Although the use of this type of combined variables is widely accepted, it can give rise to false positives that are hard to interpret.⁴ The overall effect observed was small (just a 1.1% reduction of risk) and no component was statistically significant. The patients from the intervention group had shorter courses on renal replacement therapies. This fact should be interpreted with caution though, since this is an open clinical trial where the criteria for these therapies were not defined in the protocol. González-Castro et al.¹ say that these results and the results observed in the SPLIT study did not happen by chance. Maybe we should mention here that with the crude comparison of events we cannot rule out chance. Also, fol-

lowing the peculiarities already exposed on the design of the SMART study we need to be extremely cautious.⁴ Conducting one meta-analysis added to the results from several ongoing studies should shed more light on this regard (NCT02835157, NCT02875873, NCT03118362).⁵ The constant pressure from the industry in the field of fluid therapy adds to all this since it complicates even more the interpretation of the tests available. Maybe saline solutions are on the tightrope, but they have been on the edge of the cliff for so many decades that there is no guarantee that they will lose the balance that they actually never needed.

References

1. González-Castro A, Ortiz-Lasa M, Bada da Silva J. SMART: is saline on the tightrope? [Article in English, Spanish]. *Med Intensiva*. 2018;42:394–5.
2. Cecconi M, Hofer C, Teboul JL, Pettila V, Wilkman E, Molnar Z, et al. Fluid challenges in intensive care: the FENICE study: a global inception cohort study. *Intensive Care Med*. 2015;41:1529–37.
3. Hammond NE, Taylor C, Finfer S, Machado FR, An Y, Billot L, et al. Patterns of intravenous fluid resuscitation use in adult intensive care patients between 2007 and 2014: an international cross-sectional study. *PLoS ONE*. 2017;12:e0176292.
4. Barea-Mendoza J, Chico-Fernández M, Montejo-González JC. Balanced crystalloids versus saline in critically ill adults. *N Engl J Med*. 2018;378:1950–1.
5. Barea-Mendoza JA, Antequera AM, Plana MN, Chico-Fernández M, Muriel A, Sáez I, et al. Buffered solutions versus isotonic saline for resuscitation in nonsurgical critically ill: protocol for cochrane review. *Anesth Analg*. 2016;123:1522–4.

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