

## Reply to the letter by O. Riggio et al. regarding “TIPS for refractory ascites”

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We are grateful for the interesting and valuable comments made by Dr. Riggio and colleagues [1]. We fully agree on the limitations of the retrospective design of our study and have commented on this ourselves. It is worth reminding that the strategy of limited stent expansion was devised at our centre at a time when there were no published trials on the use of TIPS for refractory ascites, due to the growing concern over TIPS-related encephalopathy [2]. The intended aim was to achieve a portal pressure gradient reduction of 25% or more, and thus to reduce the portal pressure significantly (similar to the subsequently suggested haemodynamic response of 20% or more to reduce the risk of variceal rebleeding [3]). As the results obtained with this strategy were promising, it was maintained over the following years. The aim of our study was to review this experience.

We agree with Dr. Riggio and colleagues that the radial force of the stent may have resulted in a further increase in diameter (and thus a further reduction in the portal pressure gradient) over time, and we have no evidence to prove or refute this. Indeed, our strategy of not routinely assessing the TIPS shunt by angiography unless clinically indicated was precisely aimed at reducing the number of interventional procedures in our patients. We also are fully aware

that our results do not necessarily apply to PTFE-covered stents (which are now commonly employed). However, this type of stent was not available at our institution during the time span described in our study.

Our study intended to suggest the possibility of adjusting the TIPS diameter according to the decrease in portal pressure gradient. We fully agree with Dr. Riggio and colleagues that further prospective trials with PTFE-covered stents are needed to evaluate whether this option will indeed result in a comparable outcome while reducing the incidence of clinical complications.

### References

1. Riggio O, Angeloni S, Ridola L, Rossi P. Can an incomplete stent expansion modulate the effects of TIPS? *J Gastroenterol.* 2009. doi:10.1007/s00535-009-0175-y.
2. Sanyal AJ, Freedman AM, Purdum PP III. TIPS-associated hemolysis and encephalopathy. *Ann Intern Med.* 1992;117(5):443–4.
3. Feu F, Garcia-Pagan JC, Bosch J, Luca A, Teres J, Escorsell A, et al. Relation between portal pressure response to pharmacotherapy and risk of recurrent variceal haemorrhage in patients with cirrhosis. *Lancet.* 1995;346(8982):1056–9.

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