

The clinical advantage of fixed 8-mm diameter VCX stents over underdilated VTS stents is not established in refractory ascites



To the Editor:

We read with great interest the article of Praktijnjo and colleagues.¹ This study compared VIATORR[®] controlled expansion (VCX) stents, a new device introduced in 2016 for the transjugular intrahepatic portosystemic shunt (TIPS) procedure,² to classical VIATORR[®] TIPS stents (VTS) used before 2016. New VCX stents calibrated at 8 mm are designed to avoid passive expansion as opposed to conventional VTS for which the diameter may passively increase to 10 mm after TIPS insertion even if the liver tract was underdilated at 8 mm, which may further increase portocaval shunting. The authors suggest that the use of fixed 8-mm diameter VCX stents improves 1-year survival and reduces the risk of encephalopathy and hepatic decompensation compared to former VTS stents initially underdilated to 8 mm.

As external validation of these results is mandatory, we retrospectively reviewed all files of patients who underwent TIPS in Erasme Hospital, Brussels, since 2010. As our policy is to dilate VCX stents to 10 mm when TIPS is used for variceal bleeding, only patients treated for refractory ascites were considered in this analysis. The main end-point was transplant-free survival at 1 year. Secondary endpoints were occurrence of hepatic encephalopathy and ascites persistence 1 year after TIPS insertion. Log-rank test was used to assess differences in transplant-free survival, incidence of hepatic encephalopathy or ascites resolution. Multivariable Cox regression proportional hazard models were used to identify factors associated with each endpoint. Overall, 78 patients with refractory ascites were included. Thirty-two patients received fixed 8-mm diameter VCX stents while 46 patients received former VTS initially underdilated to 8 mm. Characteristics of patients were similar at baseline between both groups. Overall, 48 patients (62%) were male, median age was 62 years (95% CI 57–64) and 59 patients (76%) had cirrhosis related to excessive alcohol intake. The median follow-up was 417 days (95% CI 255–556). During follow-up, 17 patients underwent stent dilatation (12 patients treated with fixed 8-mm diameter VCX stents and 5 with former VTS stents initially underdilated to 8 mm), 42 patients died and 6 were transplanted.

Compared to patients treated with VTS initially underdilated to 8 mm, patients treated with fixed 8-mm diameter VCX stents had similar 1-year transplant-free survival (66%, [95% CI 48–83%] vs. 69% [95% CI 56–83%], $p = 0.7$, Fig. 1), similar incidence of hepatic encephalopathy (50% [95% CI 34–72] vs. 44% [95% CI 31–63], $p = 0.6$), similar incidence of hepatic encephalopathy requiring hospitalization (37% [95% CI 22–62] vs. 37% [95% CI

24–57], $p = 0.9$) and similar incidence of ascites persistence (53% [95% CI 30–75] vs. 64% [95% CI 48–80], $p = 0.7$) 1 year after TIPS insertion. The percentage of patients with grade 3 or 4 hepatic encephalopathy was not different between patients treated with fixed 8-mm diameter VCX stents and those treated with VTS initially underdilated to 8 mm (47% vs. 57%, $p = 0.8$).

In multivariable analyses adjusted for age and model for end-stage liver disease score, at 1 year, fixed 8-mm diameter stents were not associated with death or liver transplantation (hazard ratio [HR] 1.35 [95% CI 0.58–3.11], $p = 0.5$), with hepatic encephalopathy (HR 1.19 [95% CI 0.59–2.40], $p = 0.6$), with hepatic encephalopathy requiring hospitalization (HR 1.04 [95% CI 0.45–2.39], $p = 0.9$) or with resolution of ascites (HR 1.19 [95% CI 0.52–2.72], $p = 0.7$). Exclusion of patients in whom stents were dilated during follow-up did not change the results.

Hence, we did not confirm that fixed 8-mm diameter VCX stents provide better survival or lower rates of liver-related events than VTS initially underdilated to 8 mm in patients with cirrhosis and refractory ascites. Whether these results are explained by differences in study populations between Praktijnjo's study and ours is unsettled. Prospective studies are warranted to assess the advantages of fixed 8-mm diameter VCX stents over former VTS initially underdilated to 8 mm in patients with refractory ascites requiring TIPS.

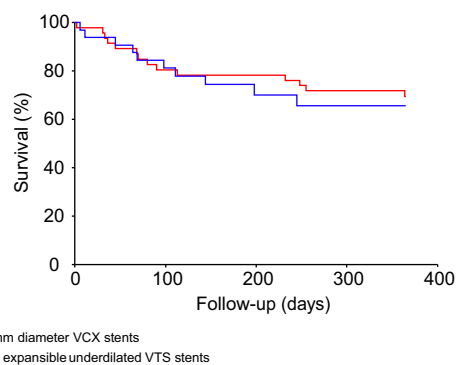


Fig. 1. Kaplan-Meier survival curves of patients with cirrhosis and refractory ascites treated with fixed 8-mm diameter VCX stents or with passively expansible 8-to-10 mm VTS stents.

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Conflict of interest

The authors declare no conflicts of interest that pertain to this work.

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Authors' contributions

Sohaïb Mansour: acquisition of data, drafting of the manuscript; critical revision of the manuscript for important intellectual content. Arnaud Lemmers: acquisition of data; analysis and interpretation of data; critical revision of the manuscript for important intellectual content. Eric Trépo: critical revision of the manuscript for important intellectual content. Christophe Moreno: analysis and interpretation of data; critical revision of the manuscript for important intellectual content. Pierre Deltenre: study concept and design; statistical analysis; analysis and interpretation of data; drafting of the manuscript; critical revision of the manuscript for important intellectual content; study supervision.

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Supplementary data

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Author names in bold designate shared co-first authorship

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