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Letter to the Editor: Abdominal Surgery in Idiopathic Noncirrhotic Portal Hypertension: Is Preemptive TIPS Reducing Postoperative Complications?

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Abbreviations: INCPH, idiopathic noncirrhotic portal hypertension; TIPS, transjugular intrahepatic portosystemic shunt.

To the Editor

We read with great interest the article by Elkrief et al. reporting long-term outcomes of abdominal surgery in patients with idiopathic noncirrhotic portal hypertension (INCPH)⁽¹⁾. In a subgroup analysis, the authors compared the outcome of patients who had (n = 33) or did not have (n = 10) a preemptive transjugular intrahepatic portosystemic shunt (TIPS), showing that TIPS before surgery had no significant impact on postoperative outcomes. This retrospective subgroup analysis had some limitations. The comparison of the clinical characteristics between the groups was performed on the data after TIPS placement, and the small sample size reduced the statistical power of the analysis. These data are still preliminary to draw any firm conclusion—as already discussed by the authors—but could potentially dissuade clinicians in using preemptive TIPS in this clinical context.

INCPH is a rare disease, and it is unlikely that survival analysis of larger cohorts will be available in the immediate future. To help readers and to highlight the magnitude of the differences between the two groups, we reanalyzed the clinical and postoperative data reported by Elkrief et al. and calculated the effect size using logit computation of standardized mean differences. As shown in Table 1, the two groups showed large differences, not only in beta-blocker use but also in history of variceal bleeding, portal vein thrombosis, and portosystemic collaterals (higher in the TIPS group). Importantly, large differences were found in the occurrence of grade ≥ 3 postoperative complications within 1 month after surgery (lower in the TIPS group). Thus, it cannot be excluded that patients who underwent decompression had more severe portal hypertension before TIPS positioning and that preemptive TIPS reduced the occurrence of severe postoperative complications and/or allowed the achievement of long-term outcomes comparable to patients with less severe complications. The results need to be confirmed on larger, ideally prospective, cohorts and should not discourage the use of this

technique in the care of preoperative patients. Moreover, preemptive TIPS could also be an important measure to increase surgical eligibility for complex operations by diminishing intraoperative bleeding and allowing a technically less demanding dissection.⁽²⁾ In patients undergoing splenectomy, a pre-emptive calibrated TIPSS could reduce the incidence of portal vein thrombosis (postoperative rate of 50% in Elkrief et al.). Hence, even though conclusive data on the postoperative benefit of preemptive TIPS in these patients are still lacking, a potential benefit in the surgical feasibility and severe postoperative complications should be considered in the preoperative workup.

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- 2) Lahat E, Lim C, Bhangui P, Fuentes L, Osseis M, Moussallem T et al. Transjugular intrahepatic portosystemic shunt as a bridge to non-hepatic surgery in cirrhotic patients with severe portal hypertension: a systematic review. HPB (Oxford). 2018 Feb;20(2):101-109.

Variable	Effect Size (Patient With Portal Decompression vs. Patient Without)
Clinical features	
Male	0.3822
Age	0.0204
Age-adjusted Charlson Comorbidity Index	0.0669
ASA score	0.0579
At least one extrahepatic comorbidity associated with INCPH	-0.2375
History of ascites	0.085
Ascites at surgery	
Absent	-0.085
Controlled with diuretics	0.1611
Clinically detected	-0.1192
Endoscopic data	
Previous variceal bleeding	0.8493
Treatments	
Anticoagulation therapy	0.1684
Antiplatelet agents	-0.3822
Diuretic agents	0.1586
Beta blockers	-1.2448
Imaging data	
Portal vein thrombosis	0.8023
Portosystemic collaterals at imaging	0.7977

Laboratory data

Platelets	-0.1287
Hemoglobin	-0.0096
INR	0.1019
Serum bilirubin	0.2177
Serum creatinine	-0.0273
Serum albumin	-0.0664
MELD score	0.056

Surgical data

Major surgery	0.2357
Minor surgery	-0.2357
Emergency procedures	0.1611

Postoperative outcomes

Occurrence of ≥ 1 grade ≥ 3 postoperative complication within 1 month after surgery	-0.5832
Occurrence of ≥ 1 portal hypertension-related complication within 3 months after surgery	-0.2296
Death within 6 months after surgery	0.0581
Unfavorable outcome	-0.0367

Effect size values <0.1 indicated very small differences; between 0.1 and 0.3 indicated small differences, between 0.3 and 0.5 indicated moderate differences and >0.5 indicated large differences (in bold). Effect size for continuous variables were calculated after estimation to mean and SD and log transformation (Wan X, Wang W, Liu J, Tong T. Estimating the sample mean and standard deviation from the sample size, median, range and/or interquartile range. BMC Med Res Methodol. 2014 Dec 19;14:135.)

Abbreviations: ASA, American Society of Anesthesiologists : INR, international normalized ratio; MELD, Model for End-Stage Liver Disease.

TABLE 1. Effect Size for the Comparison of the Patients With/Without Portal Decompression Before Surgery