Response to reviewer comments:

Reviewer # 1:

"It is an interesting case series of an uncommon procedure. It is acceptably written. There was a publication of 10 cases in W J Gastroenterology which the authors don't cite (He FL, WJG 2014), and thus publishing it in the WJH would be duplication. But is could be published in another more appropriate journal of the group"

Answer:

Thank you for your review. I would like to point out that reference (He FL, WJG 2014) is actually included in our manuscript as reference number 21 where we discuss within the manuscript among other things that although covered stents were used in this 10 cases case series, exact type of stents used was not mentioned and does not appear to have been Viatorr stents which is the current standard of care. We specifically addressed the scant literature available on Viatorr stents for parallel TIPS stent placements. Viatorr stent is a "hybrid" partly covered and partly bare metal stent that has revolutionized the TIPS procedure over the last 15 years and is the current gold standard for TIPS placement.

Reviewer # 2:

"Well written manuscript revealing that paralell TIPS in cases with primary TIPS haemodynamic dysfunction may protect the patient from further portohypertensive complications, at least for the short term postprocedural period. It appears based on these 3 cases and other previously reported by other authors, that these otherwise very sick patients with very bad prognosis may be stabilized and undergo liver transplantation in optimal condition. This approach needs further independent validation to reach final conclusions, but the authors clearly demonstrated feasibility and clinical efectiveness of paralell TIPS as the valuable option for relieving detrimentiall effects of portal hypertension."

Answer:

Thank you for your review. We absolutely agree that a large retrospective study with longer term survival data and primary and secondary patency rate should be pursued to validate our preliminary findings.

Reviewer# 3:

"1-Although there is no enough data about the role and the indications of PS for incomplete control of PHT related complication after primary TIPS insertion the subject is interesting and only small case series were reported by now. Usually a PS is indicated if PSG is not decreasing enough (< 10-12 mmHg, depending of the indication) despite maximal dilatation of the primary stent or if complete occlusion occurred with failure of recanalization of primary stent. Both situations are very rare and careful analysis of the cases should be done. In the present manuscript all three cases have some particularities that deserve special attention and more data. - in first case, after repeated esophageal variceal bleeding a first TIPS was inserted with a good PSG response (9 mmHg in the revision); 4 months later the patient rebleed from IGV despite the good functioning of the TIPS. A portal vein thrombosis with prehepatic portal hypertension that could occur in the context of pancreatitis or coil embolization could be the explanation for development of IGV. It is also known that gastric varices may bleed also at lower PSG (in this situation the IGV should be already present before the first TIPS). The authors should discus largely about these hypotheses and offer more details (as cross sectional imaging before PS).

2- the second case is suggestive for the concept that TIPS insertion is a bridge therapy until transplantation despite the fact that may control complications for long time –

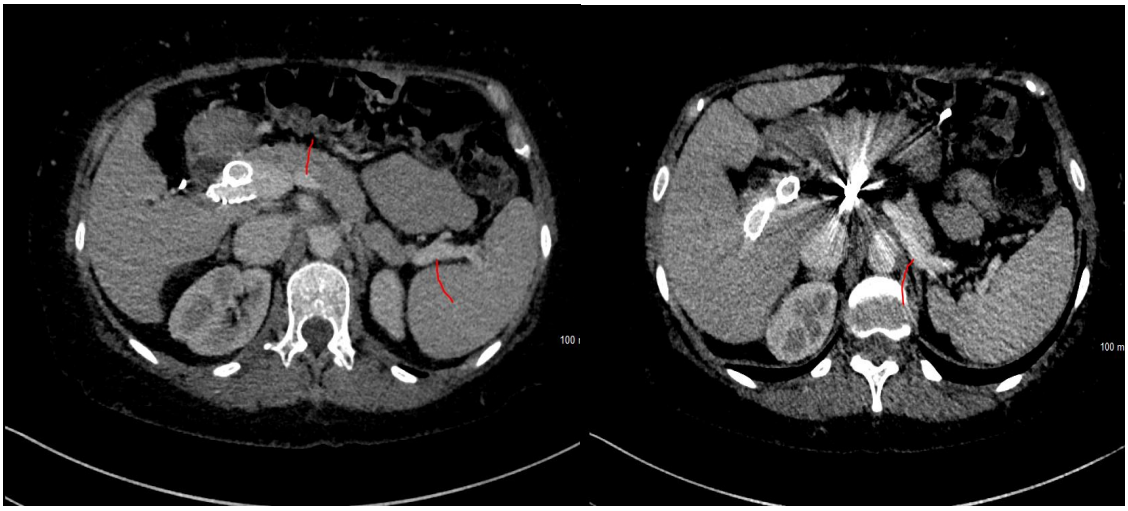
3 -in the 3rd case, the authors don't offer enough details about the source of rebleeding after first TIPS placement. "EGD showed large amount of red blood in the gastric fundus" is not enough. The bleeding could be related to ulceration from previous banding. With PSG of 9 mmHg the bleeding from esophageal varices is usually controlled.

4-Suggestions: - the tables are not essential for the subject. The aggravation of the MELD score in all 3 cases may be discussed in the text. In this form the manuscript looks too large for a case report. - instead of 3 Tables without essential information the authors could create a single table with all 3 cases and PSG before and after 1st TIPS and PS. The US velocities could be also introduced in this Table and eliminated from the text

5- information in the description of the cases could be better concentrated on the essential. Thus phrases as "Patient underwent paracentesis and was discharged with TIPS recanalization scheduled on a later date" could be deleted. "

Answers:

1-This is an excellent observation, the patient did not have splenic vein thrombosis, not even partially. We have amended the text to highlight this fact and also that the first bleeding event was identified from esophageal varices while the second event was interestingly from IGV, and as the reviewer kindly points out, IGV's can bleed even a relatively low gradient as it is seen in our case. I have included some images from his post PS CT abdomen to show the patent splenic vein, but we have omitted given not so good quality, and metal artifact.



2- This patient had liver cirrhosis secondary to AATD, suffering from recurrent large volume ascites and variceal bleeding requiring TIPS placement, the control of his portal hypertension symptoms did allow us to keep him alive, but the combination of TIPS (PS in this occasion) and his underlying disease likely worsened his baseline liver function and he was sent to liver transplant for possible evaluation.

3-Thank you for pointing this out; We have clarified this point in the text: Case 3 had bleeding type 2 gastroesophageal varices (GOV2) and no evidence of isolated gastric varices and despite a pre-PS gradient of 9 mmHg was still bleeding and we placed a PS. There was no evidence of ulceration from the prior banding 5 days earlier and there were no isolated gastric varices.

4-We have created one table with all the datasets from the three tables and also included the velocities which have been eliminated from the text, thank you for this great suggestion.

5-We have deleted the extraneous sentence. Thank you for that suggestion.

Reviewer # 4:

"Authors provide a three-case series of parallel TIPS placement using Viatorr® Stents with post-procedural outcomes. The material presented by them is quite unique. Since in 1998, Dabos et al. first described a series of 29 patients undergoing the parallel shunts, the effectiveness of parallel TIPS in treating shunt insufficiency had been demonstrated along with other options such as re-stenting and balloon angioplasty. However, I did not really meet the report of a case series with 6 month follow-up data, using Viatorr® Stents for both primary TIPS and parallel TIPS placement for the management of recurrent upper gastrointestinal variceal hemorrhage. Larger series and multicenter trials with a prospective design are required to validate the results obtained assumptions."

Answer:

Thank you for your review. We absolutely agree that our case series of parallel TIPS with Viatorr stents are unique and that larger series and multicenter trials with a prospective design are required to validate our results.