Title: Portal vein thrombosis after aortic valve replacement surgery in a patient with antithrombin III deficiency - Case report

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Author's response to reviews: see over
1. The patient apparently developed lower extremity edema along with ascites, which lead to the diagnosis. The lower extremity edema is also mentioned in the discussion section as linked to portal vein thrombosis. One question that probably deserves a little explanation is how does lower extremity edema lead to a suspicion the diagnosis of portal vein thrombosis?

I believe that your suggestion is very important. There are many potential causes of lower extremity edema in patients with heart valve replacement, including portal vein thrombosis, elevated portal venous pressure from cirrhosis, congestive heart failure, constrictive pericarditis, nephrotic syndrome and peritoneal infections.

I have added the sentence in my manuscript.

2. In the discussion section the authors also state, “...without prompting diagnosis and intervention, the portal vein pressure will be increased and eventually lead to fatal massive GI bleeding....Certainly fatal GI bleeding is one potential outcome after portal vein thrombosis along with other complications such as liver failure but fatal bleeding is probably not a forgone outcome as suggested in the manuscript.

I think that you brought up a very good point. I have revised the sentence in the manuscript.

3. How did the authors manage anticoagulation immediately after mechanical valve replacement and did their management in this particularly patient differ from their normal routine? Apparently there was some clue to heparin resistance during cardiopulmonary bypass so mention of specifics of their management such as on what postoperative day warfarin was begun, was heparin used, should be provided.

Warfarin was administered orally for since 48h after surgery to maintain the international normalized ratio (INR) at 1.5–2.0. A significant trend toward a higher frequency of thromboembolism events was observed in the group of non-Chinese patients in Western countries, while the trend in Chinese patients was a higher frequency of bleeding. Hence, there was always doubt as to whether the guideline was appropriate for Chinese patients. This high-intensity strategy is relatively more effective for races other than Chinese. In patients with mechanical heart valves, we does not suggest bridging with UFH or LMWH.

In our hospital and some other hospitals of our country, the INR for both biological valves and mechanical valves are kept in the 1.5-2.0 range, which is opposed to the recommended 2.5-3.5 range. Less intensive oral anticoagulation than recommended earlier might result in a lower incidence of bleeding complications without increasing the embolic hazard significantly.

4. The title suggests there is a literature review however the manuscript appears devoid of any previous reports of such complication.

I think that you brought up a very good point. According to your suggestion, I have changed the title.