

*In Reply:*

We would like to thank Drs. Schalkwyk and Hammer for their interest in our article.<sup>1</sup> We do agree that the central venous catheter may be in the internal thoracic vein. Due to limitations of word count for the article, it was not feasible for us to comment on other possible positions for the central vein catheter.

There have been published reports of misplaced catheters in other locations, including internal thoracic veins, as well as possible perforation of internal thoracic vein after accidental cannulation.<sup>2–4</sup> There are suggestions in these reports that the incidence of dilated internal thoracic veins may be higher in patients with portal hypertension. Second, due to the smaller caliber of these veins, the chance of being able to draw back blood after cannulation of the internal thoracic vein is small. In our case, we were able to draw back blood easily from the catheter, suggesting that persistent left superior vena cava is a more likely diagnosis. On an anterior-posterior or a posterior-anterior radiograph, the position of the catheters would look similar. We agree that a lateral radiograph or a cross-sectional image would have given additional information to distinguish between these positions. Clinical urgency precluded us from getting additional imaging in the patient.

It is important for practitioners placing central lines to keep all these possibilities in mind when faced with a situation of a misplaced catheter.<sup>5</sup> When in doubt, confirmation with saline agitation or contrast injection as well as additional

imaging, when clinically feasible, in different planes should be performed to confirm anatomical location of the catheter.

### Competing Interests

The authors declare no competing interests.

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