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Visual Case Discussion

A low-cost, easy to make ultrasound phantom for training healthcare providers in peritoneal fluid identification and task simulation in ultrasound-guided paracentesis

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Simulation education for procedures has been shown to increase confidence and decrease complications.3 The use of point-of-care ultrasound for paracentesis has been shown to decrease complications associated with this procedure.1 2 The phantom described in this article can be used in the ultrasound identification of abdominal anatomy (peritoneum, bowel, and peritoneal fluid). The phantom can also be used for needle tracking and eye-hand coordination for training of health care providers in point-of-care ultrasound guided paracentesis. It can be difficult to learn and perform paracentesis in real time on patients while a phantom provides a low-risk setting in which multiple attempts can be made. (Figs. 1–3).

Fig. 1. Final step in paracentesis phantom with gelatin model on top of ascitic fluid.

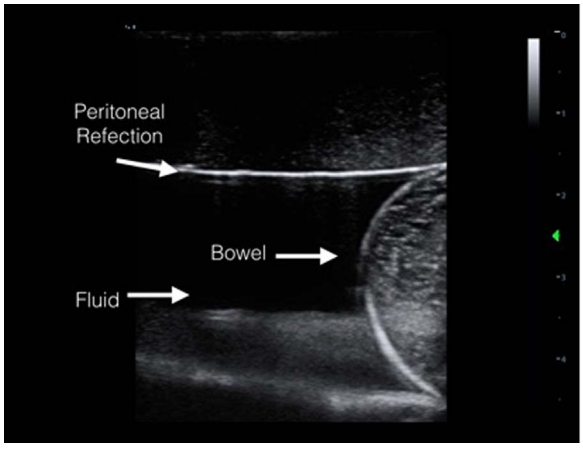

Fig. 2. Ultrasound image of the paracentesis phantom demonstrating bowel, peritoneal fluid and peritoneum.

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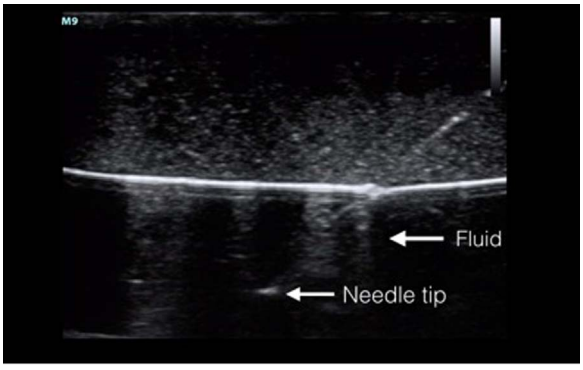

Fig. 3. Ultrasound image of paracentesis phantom with needle tracking.

Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.visj.2017.02.001.

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