

As a feasible alternative, we describe the innovative use of a lightly embalmed cadaver for realistic practice of common interventional radiology (IR) procedures prior to direct patient care” Meek et al (2018).

Abstract:

RATIONALE AND OBJECTIVES: Competency in ultrasound (US) imaging and US-guided procedures is often difficult for medical students and residents to master. The use of simulation training has been strongly encouraged but the quality of phantom models available for US-guided procedures is limited. As a feasible alternative, we describe the innovative use of a lightly embalmed cadaver for realistic practice of common interventional radiology (IR) procedures prior to direct patient care.

MATERIALS AND METHODS: Lightly embalmed cadavers were positioned as patients would be in the IR suite: supine, prone, and erect seated position. Lidocaine was injected and visualized under standard percutaneous techniques and sonographic guidance was used to simulate common US-guided procedures performed in IR including liver biopsy, kidney biopsy, thoracentesis, and vascular access.

RESULTS: The ability to position cadavers was a key factor that allowed entire procedures to be simulated. Medical students with very limited exposure to US imaging and diagnostic radiology residents with minimal exposure to US imaging successfully completed common US-guided procedures. Arterial and venous vascular access was obtained. Wires were passed and catheters easily placed via both access sites. The texture of the tissue layers provided realistic feedback for the trainees as they advanced the needle or dilated the tissues. Images from each simulated procedure resembled images expected in a living patient.

CONCLUSION: Lightly embalmed cadavers are an innovative and feasible tool to simulate common IR US-guided procedures in a realistic fashion for deliberate practice in advance of first-attempt encounters with patients.

Reference:

Meek, M.E.M., Meek, J.C., Hollowoa, B., Li, R., Deloney, L.A. and Phelan, K.D. (2018) Lightly Embalmed Cadavers as a Training Tool for Ultrasound-Guided Procedures Commonly Used in Interventional Radiology. Academic Radiology. July 14th. .

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