aneurysm, cardiac, biliary, urinary tract, deep vein thrombosis, soft tissue or musculoskeletal, thoracic, ocular and procedural guidance (American Institute of Ultrasound in Medicine, 2008). BJHM

Table 1. Functional clinical categories of emergency ultrasound

Resuscitative: during peri-arrest situations
Diagnostic: an aid to initial clinical assessment
Symptom or sign-based: triggered by a patient's presenting symptoms
Procedure guidance: to help guide a procedure
Therapeutic and monitoring: for physiological monitoring

From American College of Emergency Physicians (2001)

American College of Emergency Physicians (2001) ACEP Emergency Ultrasound Guidelines. *Ann Emerg Med* **38**: 470–81
American Institute of Ultrasound in Medicine (2008) AIUM Practice Guideline for the performance of the focused assessment with sonography for trauma (FAST) examination. *J Ultrasound Med* **27**(2): 313–18
Breitkreutz R, Walcher F, Seeger FH (2007) Focused echocardiographic evaluation in resuscitation management: Concept of an advanced life support-conformed algorithm. *Crit Care Med* **15**(Suppl 5): S150–S161
Breitkreutz R, Price S, Steiger HV et al (2010) Focused echocardiographic evaluation in life support and peri-resuscitation of emergency patients: a prospective trial. *Resuscitation* **81**(11): 1527–33 (doi: 10.1016/j.resuscitation.2010.07.013)
Soar J, Deakin CD, Nolan JP et al (2005) European Resuscitation Council guidelines for resuscitation; Cardiac arrest in special circumstances. *Resuscitation* **67**(Suppl 1): S135–S170

LEARNING POINTS

- Hypotension as a result of pericardial effusion is preload responsive, while pulmonary embolism is preload sensitive.
- Emergency bedside ultrasound is intended to be used rapidly at the point of care as an adjunct to clinical examination in the critically ill or peri-arrest patient to guide critical decision-making.
- With patients presenting with chest pain, focused cardiac ultrasound can help to evaluate potentially life-threatening situations like pericardial effusion, pulmonary embolism and aortic dissection.
- Ultrasound increases diagnostic certainty and shortens time to definitive therapy. It can also decrease complications from blind procedures that carry an inherent level of complications.

Nicorandil-associated skin necrosis around a stoma site

An 89-year-old woman underwent a Hartman's procedure for an obstructed diverticular stricture. A year later, she presented with severely painful ulcerated skin around the end of the colostomy, not responding to stoma care management (*Figure 1*). Surgeons discussed whether to re-site the stoma, or to try and repair the stomal hernia using a porcine collagen mesh. It was then noticed that she had recently started taking oral nicorandil for ischaemic heart disease.

Nicorandil is a vasodilatory drug indicated for the prophylaxis and treatment of stable angina. Common side effects include flushing, palpitation, weakness, headache, mouth ulcers, nausea and vomiting (Joint Formulary Committee, 2012), but peri-anal, ileal and peri-stomal ulceration have been reported as side effects (Abdelrazeq et al, 2006; Donaldson et al, 2009).

After stopping nicorandil, her ulcers healed significantly within 6 weeks (*Figure 2*). Awareness of this association can help treat such painful, non-healing parastomal ulcers, and avoid unnecessary and costly investigations and treatments. BJHM

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Abdelrazeq AS, Owen C, Smith L, McAdam JG, Pearson HJ, Leveson SH (2006) Nicorandil-associated para-stomal ulceration: Case series. *Eur J Gastroenterol Hepatol* **18**(12): 1293–5
Donaldson JF, Flohr C, English JS (2009) Peristomal ulceration with nicorandil. *Colorectal Dis* **11**(4): 426–7
Joint Formulary Committee (2012) *British National Formulary.* 63rd edition. British Medical Association and the Royal Pharmaceutical Society, London

Figure 1. Severely ulcerated skin around colostomy.

Figure 2. Ulcers healing after stopping nicorandil.