

## Letters to the editor

### OVERVIEW

Please submit letters for the editor's consideration within three weeks of receipt of *Clinical Medicine*. Letters should ideally be limited to 350 words, and sent by email to: [clinicalmedicine@rcplondon.ac.uk](mailto:clinicalmedicine@rcplondon.ac.uk)

BRIAN BOURKE

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### Central lines and the general medical register – time for a change in the curriculum?

Editor – Napier and Mitchell<sup>1</sup> have highlighted concerns among some trainees in general internal medicine (GIM), both in terms of patient safety and the current relevance of the skill of central venous access to the GIM physician.

The need for central venous access, often in an emergency situation, is likely to always be within the remit of the on-call medical registrar although increasingly the role of performing the procedure is undertaken by an on-call anaesthetist or, during normal daytime hours, by a dedicated venous access team. However, the availability of anaesthetists and venous access teams out of hours is often very limited, especially in smaller hospitals.

Patient safety must be viewed from both the aspect of 'do no harm' and life-saving treatment that may be required within minutes rather than a procedure that can be delayed until a dedicated team or an anaesthetist is available.

The Specialty Advisory Committee in General Internal Medicine has discussed this issue extensively, taking into account the current guidelines from both the National Institute for Health and Care Excellence (NICE)<sup>2</sup> and those from the Royal College of Anaesthetists (RCA),<sup>3</sup> and has sought the views of trainers and trainees.

In view of these concerns, the latest Joint Royal Colleges of Physicians Training Board (JRCPTB) decision aid for procedural competences (revised November 2014) used in conjunction with the specialty training curriculum for general internal medicine<sup>4</sup> states that central venous access is an essential competence but does not mandate this as requiring ultrasound-guided jugular or subclavian venous access skill; instead, it states that resuscitation by means of the less hazardous femoral venous approach is sufficient as a minimum essential skill and can be acquired by skills lab training with certification or some clinical experience with directly observed procedural skill (DOPS) indicating ability to perform the procedure under supervision or with assistance.

Trainers and those assessing trainees' acquisition of competence recognise that a compromise between aspiration and the current reality in hospital practice, coupled with patient safety, is needed. Thus, continuing to require a skill that may be life-saving should be maintained, but safety is paramount. ■

### Conflicts of interest

The author has no conflicts of interest to declare.

### References

- 1 Napier CM, Mitchell AL. Central lines and the general medical registrar – time for a change in the curriculum? *Clin Med* 2016;16:604.
- 2 National Institute for Health and Care Excellence. *Guidance on the use of ultrasound locating devices for placing central venous catheters*. NICE technology appraisal No 49. London: NICE, 2002.
- 3 Safe Anaesthesia Liaison Group. *Patient safety update: including the summary of reported incidents relating to anaesthesia. 1 January to 31 March 2015*. London: Royal College of Anaesthetists, 2015. [www.rcoa.ac.uk/system/files/CSQ-PSU-PSU-JUNE2015.pdf](http://www.rcoa.ac.uk/system/files/CSQ-PSU-PSU-JUNE2015.pdf) [Accessed 28 February 2-17].
- 4 Joint Royal Colleges of Physicians Training Board. *Specialty training curriculum for general internal medicine*. London: JRCPTB, 2009 (Revised 2012).

### Lead or be led: an update on leadless cardiac devices for general physicians

Editor – I read with interest the article about leadless pacemakers in a previous issue of *Clinical Medicine*.<sup>1</sup> The subcutaneous implantable cardioverter defibrillator (S-ICD) has been around for several years and is still undergoing evaluation. Leadless pacing in the right ventricle is in its infancy with two major companies offering devices. The authors state that 'battery life is predicted to exceed traditional devices' and the device is 'small enough for the right ventricle to accommodate further implantations without the need for extraction'. This rather glibly glosses over the potential problems of using these miniature devices. Elective replacement is almost completely ignored in the small number of publications about leadless pacemakers. Extraction of expired devices is not practical and would be extremely difficult because of fibrosis and tethering as occurs with standard endocardial leads and various debris lodged in the right ventricle (such as displaced renal shunt stents – personal experience). Implantation of further devices without removing the expired one could interfere with right ventricular function by various mechanisms – papillary muscle dysfunction, tricuspid valve regurgitation or stenosis, restricted annular motion, perforation, systolic and diastolic impairment. Furthermore, the indexed end systolic volume of the right ventricle in an adult is about 33 mL.<sup>2</sup> The device volume is given as 0.8 cc in the company online brochure<sup>3</sup> but specific dimensions are not stated other than the inter-electrode distance of 18 mm. These measurements are not inconsiderable when compared to those of the right ventricle. A single device, let alone additional ones, will probably adversely affect overall right ventricular function. These effects remain to be seen. Leadless pacemakers will have clinical applications in appropriate patient groups, such as the frail and

elderly. Many patients will have old standard endocardial leads in place, which may impede deployment. Careful monitoring of right ventricular function should be undertaken. ■

### Conflicts of interest

The author has no conflicts of interest to declare.

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### References

- 1 Wiles BM, Roberts PR. Lead or be led an update on leadless cardiac devices for general physicians. *Clin Med* 2017;17:33–6.
- 2 Kovalova S, Necas J, Vespalic J. What is a normal right ventricle? *Eur J Echocardiogr* 2006;7:293–7.
- 3 Medtronic. Micra: transcatheter pacing system for bradyarrhythmia management. [www.medtronic.com/us-en/healthcare-professionals/products/cardiac-rhythm/pacemakers/micra-pacing-system.html](http://www.medtronic.com/us-en/healthcare-professionals/products/cardiac-rhythm/pacemakers/micra-pacing-system.html) [Accessed 1 March 2017].

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