Highlights from this issue

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Mary Dawood, *Associate Editor*

Organ donation in the emergency department

Possibly one of the most sensitive and daunting conversations that takes place in the ED is about organ donation. By virtue of circumstances this conversation usually occurs subsequent to breaking news of death or imminent death. Broaching the subject of organ donation can seem ill timed, insensitive and is difficult for even the most skilled clinicians. Even so, organ donation is a core competency in emergency medicine as is the management of patients in the final stages of life, furthermore we have a duty as healthcare professionals to explore this potential at the end of life. In the UK in 2015–16 a record number of organs were donated and transplanted but the consent rate is still one of the lowest in Europe. At the end of 2015 there were nearly 7000 people waiting for a transplant, 429 died while waiting and a further 807 were removed from the list most likely due to deteriorating health. Despite ongoing teaching of emergency staff and expert support from specialist nurses, opportunities for organ donation can still be lost in the urgency and fast pace of the ED as well as the perceived difficulties of managing the logistics of donation before death (DBD) or donation after circulatory death (DCD). Outcomes from DBD are better but an ongoing shortage of organs is seeing the reintroduction of a long abandoned practice of (DCD). This month's issue includes a very informative paper by Gardiner and colleagues along with a commentary by Bernard Foex about organ donation. Gardiners paper describes current transplantation practice in the UK, associated ethical and legal issues, the classification of deceased donors and future developments promising greater numbers of organs. Foex's commentary discusses withdrawal of life sustaining therapy and the case for delay.

Both these papers are a 'must read' for ED clinicians everywhere to remind us that the potential to change lives for better is enormous and the urgency for organ donation is greater than ever as we live longer.

Saving money

Containing the ever increasing costs of healthcare is both a challenge and a necessity in all health economies. We are constantly entreated by our 'money masters' to find not only more cost effective ways of delivering care but cheaper consumables. In the minds of many clinicians cheaper consumables often equate to poorer quality so it was very interesting to read of a study by Riguzzi *et al* from San Francisco comparing cost of commercially produced ultrasound gel which is relatively expensive with an alternative cornstarched based gel. They found that the corn starched gel which cost <10 cents per bottle produced images of similar quality to those using commercial gel which costs about $5 dollars. Given that point of care ultrasound is increasingly used in low resource settings, over time, this may represent a tidy sum that could be used elsewhere. Think about this the next time you liberally squirt expensive ultrasound gel!.

Sepsis again

Lifesaving treatment for sepsis is relatively straightforward–so many more lives should be saved every year if treatment is started in a timely way. It is therefore an ongoing concern that so many people still die from sepsis every year. The difficulty is spotting this complex condition as soon as a patient presents so we need to ask whether our triage systems are sufficiently sophisticated to support early recognition. Graff and colleagues in Germany undertook an evaluation of the Manchester triage system (MTS) to assess its effectiveness in identifying septic patients. They found the MTS to have some weakness with respect to priority in patients with sepsis and that discriminators for identifying systemic infection are insufficiently considered. In view of the fact that MTS and similar versions are so widely used it is well worth reading this paper to revisit our triage systems and how we can improve detection of sepsis at triage.

Weighing patients: a guestimate?

Some EDs are fortunate to have high specification trolleys that have built in scales for weighing patients. Most of us probably don't work with such sophisticated facilities so we resort to roughly estimating a patient's weight in emergency situations. This is a concern when using time critical drugs that require precise dosing according to weight. I was curious then to read of a study in this issue by Cattermole and colleagues in the UK that aimed to develop and validate an accurate method for estimating weight in all age groups using mid arm circumference.(MAC) They derived a simplified method of MAC based weight estimation from a linear regression equation: weight in kg=4xMAC (in cm)−50. They found that this formula is at least as precise in adults and adolescents as commonly used paediatric weight estimation tools are in children. The authors advise that a gender specific model would improve precision but this would require a tape or smartphone. This study is well worth a read as a more accurate way of estimating weight is to be welcomed especially as rising obesity levels will call for more consistent documentation of weight and precise dosing.

Adaptive design clinical trials in the ED?

Conducting and sustaining clinical trials in emergency settings can be difficult for a variety of reasons. One reason may relate to the fixed nature of the designs that are traditionally used in ED trials, where conduct and analysis are outlined at the outset and are not examined until the trial is finished. This fixed design may in many instances take too long and be costly both to patients and staff. It may be time to consider alternative ways of conducting clinical trials in the ED that may be more effective and conducive to the ED setting. In this issue, Flight et al hypothetised that the majority of published emergency medicine trials have the potential to use a simple adaptive trial design where planned interim analysis is factored in to determine whether studies should be stopped or modified before recruitment is complete. Their study reviewed clinical trials published in three emergency medicine journals between January 2003 and December 2013. They found that out of 188 trials, only 19 were considered to have used an adaptive trial design. A total of 154/165 trials that were fixed in design had the potential to use an adaptive design. For those of us grappling with the challenges of clinical trials in the ED, this approach is worthy of consideration.