Saving Young Lives: provision of acute dialysis in low-resource settings

Acute kidney injury in low-resource settings is a frequently fatal complication of common infections such as malaria, dehydration caused by severe diarrhoea, and obstetric complications, and it disproportionately affects children and young adults. The International Society of Nephrology (ISN) 0by25 initiative aims to eliminate preventable deaths from this complication worldwide by 2025.[1] Acute kidney injury is preventable and treatable, with a survival rate of more than 50% if acute dialysis is available during the 7–14 days needed for most patients to recover kidney function. However, in many low-resource settings, it still remains a death sentence. To address this unmet need, we initiated the Saving Young Lives Project in 2012, to establish programmes for acute peritoneal dialysis in such settings. This procedure is technically straightforward, affordable, and realistic to deliver, since neither electricity nor complex equipment is needed. Saving Young Lives is a partnership among three nephrology educational organisations—namely, the ISN, International Pediatric Nephrology Association, and International Society for Peritoneal Dialysis—and the Sustainable Kidney Care Foundation, a non-profit organisation that provides dialysis supplies in low-resource settings.

So far, 11 centres have been selected in sub-Saharan Africa and southeast Asia; local physician–nurse pairs who are passionate about this mission have been identified, and hospitals have committed to sustain the programme after provision of supplies and education in the first 2 years. More than 50 physicians and nurses from these centres have received hands-on training in peritoneal dialysis and catheter insertion in Cape Town, South Africa, the only such course in sub-Saharan Africa. External mentoring is provided for each centre by an experienced nephrologist who is familiar with the challenges of work in low-resource settings.

Reliable availability of catheters and fluid for this procedure has remained challenging. Although cuffed catheters and commercial fluid are preferred, when these are unavailable locally prepared fluids and available multipurpose catheters are acceptable alternatives. Between January, 2013, and September, 2015, 175 children and adults have received acute peritoneal dialysis in eight Saving Young Lives Project centres. The procedure was done for a mean of 13 days (SD 14), and 58 (33%) of the 175 treated patients left the hospital with completely recovered kidney function. Although only a few lives have been saved so far, this experience is a template for sustainable programmes for acute peritoneal dialysis applicable to low-resource settings worldwide. These results are encouraging, but true sustainability will require governmental recognition that this procedure is affordable, practical, and can save lives. We invite others to join us in expanding the Saving Young Lives programme worldwide.

For the **FRAX calculation tool** see https://www.shef.ac.uk/FRAX/tool.jsp

For more on the **Saving Young Lives Project** see http://www.theisn.org/initiatives/saving-young-lives-project

We declare no competing interests.

*William E Smoyer, Fredric O Finkelstein, Mignon McCulloch, Mary Carter, Ariane Brusselmans, John Feehally
William.Smoyer@Nationwidechildrens.org

Center for Clinical and Translational Research, The Research Institute at Nationwide Children's Hospital, Columbus, OH, USA (WES); Department of Pediatrics, The Ohio State University, Columbus, OH 43205, USA (WES); Department of Medicine, Yale University, New Haven, CT, USA (FOF); Red Cross Children's Hospital, Cape Town, South Africa (MM); Sustainable Kidney Care Foundation, New York, NY, USA (MC); International Society of Nephrology, Brussels, Belgium (AB); and University Hospitals of Leicester, University of Leicester, Leicester, UK (JF)

1 Horton R. Offline: Breaking the silence in nephrology. *Lancet* 2015; **385:** 1058.

Denosumab and fracture risk in women with breast cancer

We read with interest the provocative study by Michael Gnant and colleagues (Aug 1, p 433),[1] in which they draw attention to increased fracture risk due to adjuvant aromatase inhibitor therapy. Despite this well designed and well conducted study, we believe it is too soon to treat all patients initiating aromatase inhibitor therapy with denosumab.

WHO's 10 year Fracture Risk Assessment Tool (FRAX) or another tool could be used to determine the appropriateness of antiresorptive therapy in patients initiating aromatase inhibitor therapy. Ethnicity is an independent risk factor included in FRAX that heavily modulates fracture risk, even among individuals within the same country. The Austrian and Swedish study population in ABCSG-18[1] has a FRAX risk similar to that of a US white population but roughly double that of other US ethnic origins (African American, Hispanic, or Asian). One analysis from the ATAC trial[2] showed that fracture risk was modulated by geographical region. Age was also a fracture risk factor in the ATAC trial; similarly, fracture incidence in the ABCSG-18 trial was numerically lowest in the age tertile below 60 years, both in the placebo and denosumab groups. Age, a well characterised and independent risk factor for fracture, is included in FRAX[3] and should also be considered when making treatment decisions for postmenopausal women with breast cancer who begin aromatase inhibitor therapy.

The ABCSG-18 data challenge the notion that bone mineral density can predict fractures in patients receiving aromatase inhibitor therapy. The