International experts call for an end to preventable deaths from acute kidney injury by 2025

March 13 2015

Preventable deaths caused by acute kidney injury (AKI) could be nearly eliminated in just 10 years, according to leading medical experts. This often forgotten condition - which affects around 13 million people every year and contributes to 1.7 million deaths annually - is preventable and can be treated for as little as $US150 per patient.

A major new Commission from *The Lancet* and the International Society of Nephrology (ISN) reports on an ISN initiative, launched in 2013, which calls for preventable deaths from AKI to be eliminated by 2025 (0by25). According to Professor Giuseppe Remuzzi, President of the ISN, and one of the Commission authors, "The ability to provide lifesaving treatments for acute kidney injury provides a compelling argument to consider therapy for it as much as a basic right as it is to give antiretroviral drugs to treat HIV, especially as care needs only be given for a short period of time in most patients."

AKI, which causes an abrupt or rapid decline in kidney function, is a serious and increasingly common condition worldwide. In high-income countries, AKI often arises after major surgery and use of medicines which affect kidney function in hospitals, whereas in low- and middle-income countries (LMICs) it is mainly a community-acquired disease that affects young and previously healthy individuals, and is often associated with diarrhoea, infections such as malaria, and toxins (see table 5 page 8).

Complications include chronic kidney disease and end-stage renal disease that need dialysis and transplantation, resulting in high long-term costs. NICE estimates the yearly cost of AKI to the NHS in England to be between £434 million and £620 million per year, which is higher than the costs associated with breast cancer, or lung and skin cancer combined.

New estimates produced for the Commission suggest that 1 in 5 adults admitted to hospital worldwide develop AKI (see figure 3 page 6). But because most cases in LMICs are not recorded, this is likely to be only the tip of the iceberg in terms of the true public health burden of AKI in these regions, say the authors.

Despite most avoidable deaths occurring in LMICs where there are few resources to diagnose and treat AKI, the Commission shows that most cases of AKI are preventable, can be detected early, and are treatable with 1-2 weeks of peritoneal dialysis for as little as US$150. This type of dialysis can be done in most settings because it doesn't require electricity or water supplies.

The Commission sets out an achievable three-pronged strategy against AKI. First, to establish the true burden of AKI and include it on the global health agenda. Second, to raise awareness of AKI at all levels of national health systems and improve patient care based on the 5 Rs: risk (identifying high-risk individuals), recognition (prompt diagnosis), response (effective interventions), renal support (dialysis), and rehabilitation (see figure 1 page 3). And third, to persuade stakeholders, including governments and charities, of the economic merits of investing in a sustainable infrastructure. This could be done by framing AKI as a condition that disproportionately affects people during their economically productive years, and which can be treated at a reasonable cost.

While 0by25 might seem like an ambitious target, Commission co-author Professor Ravindra Mehta from the University of California San Diego Medical Center, USA, says, "We are confident that many of the preventive and therapeutic interventions against AKI can use existing infrastructure, advances in technology, and human resources across different regions. The remarkable accomplishment of the AIDS 3by5 initiative (3 million people with HIV on anti-retroviral treatment by 2005) in low-resource countries provides evidence that concerted efforts can lead to success in reducing the burden of devastating diseases. However, 0by25 will only be feasible if diagnostics and dialysis equipment and supplies are made available at low cost and if national health authorities can be encouraged to invest in sustainable infrastructure to address kidney disease."

Writing in a Comment accompanying the Commission, Lancet Editor-in-Chief Dr Richard Horton and Senior Editor Philippa Berman say, "The evidence gathered [in this Commission] provides a firm foundation to establish a compelling human rights case for nephrology. [The authors]...have offered an achievable strategy to reach 0by25. *The Lancet*'s commitment now is to work with the ISN to ensure accountability for the goals set out in the Commission—to monitor, review, and act to ensure progress towards 0by25."

The Commission will be presented at the World Congress of Nephrology in Cape Town, South Africa on March 13-17, 2015.

More information: *The Lancet*, www.thelancet.com/journals/lan … (15)60126-X/abstract

Provided by Lancet