The more, the merrier

An inverse relationship has long existed between hospital volume (number of procedures performed) and mortality related to surgical procedures. Modern advances in surgery are expected to attenuate this effect. Using national Medicare claims data from 2000 to 2009, researchers at the University of Michigan examined mortality among 3,282,127 patients who underwent one of eight gastrointestinal, cardiac or vascular procedures. Hospitals were stratified into quintiles of operative volume. During the entire 10-year period, a significant inverse relationship was observed in all procedures. In five of eight procedures studied, the strength of the volume–outcome relationship increased over time. Only pancreatostomy showed a notable decrease in strength of the relationship over time. For all procedures examined, higher volume hospitals had significantly lower mortality rates than lower volume hospitals (Ann Surg 2014;260:244–51).

Preventing tuberculosis in HIV-positive patients

In a double-blind, placebo-controlled trial in South Africa, HIV-positive patients who were receiving antiretroviral therapy were randomized to receive either preventive isoniazid therapy (n=662) or a placebo (n=667) for 12 months. Tuberculosis was excluded at baseline. The primary end-point was time to development of incident tuberculosis (definite, probable or possible). Over 3,227 person-years of follow-up, 95 incident cases of tuberculosis were detected: 37 in the isoniazid therapy group (2.3 per 100 person-years), and 58 in the placebo group (3.6 per 100 person-years) with a hazard ratio of 0.63. The effect of isoniazid was independent of the baseline tuberculin skin test or interferon gamma release assay positivity. Isoniazid preventive therapy is recommended for all HIV-positive patients on antiretroviral therapy (Lancet 2014;384:682–90).

Central venous catheter-related bloodstream infections

A meta-analysis was done to assess the efficacy of a chlorhexidine-impregnated dressing for prevention of central venous catheter-related colonization and catheter-related bloodstream infection. Data were extracted from nine randomized controlled trials addressing this question. Use of a chlorhexidine-impregnated dressing was found to reduce the prevalence of catheter-related bloodstream infection (random effects relative risk 0.60). The prevalence of catheter colonization was also markedly reduced in the chlorhexidine-impregnated dressing group (random effects relative risk 0.52). These results suggest the need for replacing conventional dressings with chlorhexidine-impregnated ones when using central venous lines (Crit Care Med 2014;42:1703–13).

Safe for older individuals to donate a kidney

Concerns have been raised over long-term outcomes, especially mortality and cardiovascular disease, in older (≥55 years of age) live kidney donors. Older live kidney donors were matched to healthy older individuals in the Health and Retirement Study. The primary outcome was mortality and secondary outcomes ascertained among pairs with Medicare coverage included death or cardiovascular disease (CVD). From 1996 to 2006, there were 5,717 older donors in the USA. Of these, 3,368 donors were matched 1:1 to older healthy non-donors. Among donors and matched pairs, the mean age was 59 years and 41% were men. After a median follow-up of 7.8 years, mortality was similar between donors and matched pairs. The combined outcome of death/CVD was also comparable between donors and non-donors (Am J Transplant 2014;14:1853–61).

Epidural glucocorticoids ineffective in lumbar stenosis

In a double-blind, multi-site, randomized trial, 400 patients who had lumbar central spinal stenosis with moderate-to-severe leg pain and disability to receive epidural injections of glucocorticoids plus lidocaine or lidocaine alone. The primary outcomes were the score on the Roland–Morris Disability Questionnaire (RMDQ, scores range from 0 to 24, with higher scores indicating greater physical disability) and the rating of the intensity of leg pain (on a scale from 0 to 10, with 0 indicating no pain and 10 indicating ‘pain as bad as you can imagine’). At 6 weeks, there were no significant differences in the RMDQ score or the intensity of leg pain between the two groups. This is the first randomized controlled trial to show lack of efficacy for this commonly used intervention (N Engl J Med 2014;371:11–21).

The less salt, the better

The effect of salt consumption on cardiovascular mortality was assessed in the NUTRICODE (Global Burden of Diseases Nutrition and Chronic Diseases Expert Group) study. Data were collected from surveys on sodium intake as determined by urinary excretion and diet in persons from 66 countries. These data were used to quantify the global consumption of sodium according to age, sex and country. The effects of sodium on blood pressure were calculated from data in a new meta-analysis of 107 randomized interventions, and the effects of blood pressure on cardiovascular mortality were calculated from a meta-analysis of cohorts. Cause-specific mortality was derived from the Global Burden of Disease Study 2010. The estimated mean global sodium consumption was 3.95 g per day (range 2.18–5.51 g per day). Globally, 1.65 million annual deaths from cardiovascular causes were attributed to sodium intake above the reference level of 2 g per day. These deaths accounted for nearly one of every ten deaths from cardiovascular causes (9.5%). Four of every five deaths (84.3%) occurred in low- and middle-income countries, and two of every five deaths (40.4%) were premature (<70 years of age) (N Engl J Med 2014;371:624–34).

New guidelines on the management of skin and soft tissue infections

The Infectious Diseases Society of America (IDSA) has issued its 2014 update to the 2005 guidelines for the treatment of skin and soft tissue infections (SSTIs). These guidelines incorporate the recent IDSA recommendations for the management of methicillin-resistant Staphylococcus aureus infections. The recommendations address both the diagnosis and appropriate treatment of diverse SSTIs ranging from minor to life-threatening infections such as necrotizing fasciitis. A key addition to the previous version is the evaluation and management of such infections in immunocompromised hosts worldwide. The guidelines continue to emphasize the importance of clinical skills in promptly diagnosing SSTIs, identifying the pathogen, and administering effective treatments in a timely fashion (Clin Infect Dis 2014;59:147–59).

VIVEK ARYA