Clinical Shorts

Give me a break

We know that having a low-trauma fracture increases the risk of subsequent fracture, yet less than 30% of postmenopausal women and less than 10% of men with prior fracture are given fracture-preventive therapy. How big is the risk of subsequent fracture? Most studies attempting to answer this question have focused on women and looked at a single fracture type (eg, hip). A group of researchers in Australia decided to look more broadly at this issue. They wanted to assess the absolute risk of any subsequent fracture following initial low-trauma fracture (fracture caused by a fall from standing height or lower) in both men and women.

Set in Australia, the prospective cohort study (Dubbo Osteoporosis Epidemiology Study) followed 2245 community-dwelling women and 1760 men aged 60 years or older who lived in the community from 1989 through 2005. Dubbo is a small city 400 km northwest of Sydney. Almost 99% of the population is white.

There were 905 women (40%) and 337 men (19%) who had initial low-trauma fractures. Of this group, 253 women and 71 men had subsequent fractures. The relative risk of subsequent fracture was 1.95 (95% confidence interval, 1.70-2.25) for women and 3.47 (95% confidence interval, 2.68-4.48) for men.

The absolute risk of subsequent fracture was similar for men and women and at least as great as the initial fracture risk for women 10 years older or for men 20 years older. This increase in absolute risk of fracture remained for up to 10 years. By this time, 40% to 50% of surviving men and women had subsequent fractures.

All fracture locations, other than rib (in men) and ankle (in women), resulted in increased risk of subsequent fracture, with the highest relative risks following hip and clinical vertebral fractures in younger men. In multivariate analysis, predictors of subsequent fracture in women were age, smoking, and femoral neck bone mineral density. In men, predictors were physical activity, calcium intake, and femoral neck bone mineral density.

Bottom line

- Low-trauma fracture is a signal for increased risk of all types of subsequent osteoporotic fractures, particularly in the 10 to 15 years after initial fracture.
- Low-trauma fracture indicates the need for early fracture-preventive therapy.

Source: Center JR, Bliuc D, Nguyen TV, Eisman JA. Risk of subsequent fracture after low-trauma fracture in men and women. *JAMA* 2007;297:387-94.

Switch tactics

The length of stay in severe community-acquired pneumonia (CAP) is often determined by the duration of intravenous (IV) antibiotic treatment. An earlier switch to oral antibiotics might facilitate early discharge, but there have been concerns that it might increase the rate of treatment failure, readmission, or death.

Researchers from the Netherlands conducted a multicentre randomized trial to evaluate the effectiveness of an early switch to oral antibiotics with the usual 7-day course of IV antibiotics in severe CAP. The primary outcome measure was clinical cure (defined as patients discharged in good health without signs and symptoms of pneumonia and no treatment failure during follow-up); the secondary measure was length of hospital stay.

More than 300 patients with pneumonia with a severity index class IV or V were enrolled in the trial that was set in 7 academic hospitals. Patients were excluded if they required mechanical ventilation or had other significant complicating factors (eg, cystic fibrosis, severe immunosuppression). If clinically stable, patients randomized to the intervention group were switched from IV to oral antibiotics on the third day of hospitalization to complete a total of 10 days. Patients in the control group received a standard regimen of 7 days of IV treatment. Antibiotics were chosen on the basis of Dutch treatment guidelines.

What did the researchers find out? Thirty-seven patients were excluded from analysis before day 3, leaving 265 patients in the intention-to-treat analysis. Most patients were treated with amoxicillin alone or in combination with clavulinic acid, or a cephalosporin alone. Only 3 patients were restarted on IV drugs after being switched to oral antibiotics. Mortality at 28 days was 4% in the intervention group and 6% in the control group. Clinical cure was similar in both groups (83% to 85%). Duration of IV treatment was 3.4 days shorter in the intervention group. Length of hospital stay was 1.9 days shorter.

Bottom line

- Early switch from intravenous to oral antibiotics in patients with severe community-acquired pneumonia who do not need treatment in intensive care is safe and leads to shorter hospital stays.

Source: Oosterheert JJ, Bonten MJ, Schneider MM, Buskens E, Lammers JW, Hustinx WM, et al. Effectiveness of early switch from intravenous to oral antibiotics in severe community acquired pneumonia; multicentre randomised trial. *BMJ* 2006;333(7580):1193. DOI:10.1136/bmj.38993.560984.BE.