CLINICAL CAPSULES

TB Mortality Risks

Hospitalized tuberculosis patients have longer hospital stays and higher costs than other patients, and they have a high risk of in-hospital mortality, according to Nadia N. Hansel, M.D., and her colleagues at Johns Hopkins University, Baltimore.

The investigators reviewed 2,279 TB-related hospital admissions from the year 2000 and found that despite extensive public health efforts and the availability of curative therapy, the in-hospital mortality rate was 5%. Rates in other studies have been as high as 12%.

Length of stay was a mean of 14.2 days for those with TB admissions, compared with 4.2 days for other hospital admissions. And total charges for TB-related hospitalizations were almost 2.5 times higher than for all other hospital admissions (mean $34,000 vs. $14,000), they noted (Chest 2004;126:1079-86).

Independent predictors of mortality in this study were older age (odds ratio 1.03 per year of age), comorbid illness (OR 1.59), and emergency department admission (OR 2.38). More vigorous management and prevention strategies are needed to improve outcomes in hospitalized tuberculosis patients—especially in patients with these characteristics, they concluded.

Inpatient Vaccination

Computerized standing orders were more effective than computerized physician reminders for increasing the rate of influenza and pneumococcal vaccine administration among inpatients in a recent study.

In the randomized trial involving 3,777 general medicine patients discharged from one hospital over a 14-month period, patients eligible for vaccination were assigned to either a standing orders group or a physician reminder group. For those in the standing orders group, the hospital's computer system automatically produced vaccine orders for nurses when patients were discharged; for those in the physician reminder group, the system produced vaccine order reminders to physicians during order entry sessions, said Paul R. Dexter, M.D., of Indiana University, Indianapolis, and his colleagues.

Over about a 6-month period encompassing flu season, significantly more patients in the standing orders group, compared with the physician reminders group, received an influenza vaccine (42% of 385 vs. 30% of 463 eligible patients) and a pneumococcal vaccine (51% of 406 vs. 31% of 423 eligible patients), the investigators found (JAMA 2004;292:2366-71).

Hospitalized patients are among those most likely to benefit from influenza and pneumococcal vaccinations, and hospitalization provides an important opportunity for providing these vaccines, they concluded.

COPD Exacerbations

Patients with chronic obstructive pulmonary disease (COPD) who present with an exacerbation should be evaluated for the presence of three particular clinical characteristics that appear useful for determining if the exacerbation has a bacterial origin, according to Paul van der Valk, M.D., of Medisch Spectrum Twente, Nijmegen, the Netherlands, and his colleagues.

In a study of 116 patients presenting with an exacerbation of COPD, the combination of a negative sputum Gram stain, a nonclinical decrease in lung function, and fewer than two exacerbations in the previous 12 months was 100% predictive of a nonbacterial exacerbation. Conversely, a positive Gram stain, a clinically relevant decrease in lung function, and the occurrence of more than two exacerbations in the previous 12 months had a positive predictive value for bacterial exacerbation of 67%, they found (Clin. Infect. Dis. 2004;39:980-6).

A treatment protocol based on the presence or absence of these characteristics could reduce unnecessary antibiotic treatment in COPD patients with exacerbations by 5%-24%, they concluded.

TB Outbreak

A recent tuberculosis outbreak in Indiana—a typically low-incidence state—demonstrates the limitations of gains that have been made in TB control in recent years and underscores the need for ongoing resource commitment and preparedness for dealing with TB resurgences, according to the Centers for Disease Control and Prevention.

The rate of TB in Indiana per 100,000 population was 2.3 in 2003. One county had a higher than average rate of 2.9 per 100,000 in 2000-2002, and the rate in that county increased to 4.7 in 2003 and to 7.0 in the first half of 2004 (MMWR 2005;53:1134-5).

An ongoing investigation of the outbreak is focusing on identifying contacts of affected individuals, treating those with newly diagnosed TB, educating health care workers and the community, and closely managing patients.

—Sharon Worcester

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