International experts recommend concerted attack against infection

Current issues in clinical infection were addressed recently at an international meeting entitled “The challenge of infectious diseases, the European perspective” (Amsterdam, Netherlands, Dec 18–19). Principal areas covered were molecular methods for characterisation and tracking of newly (re)emerging infections, and the increasing problem of antibiotic resistance.

Antibiotic resistance in pathogens rapidly evolves in response to the environmental pressure of antibiotic exposure. Results presented at the meeting indicate that antibiotic-resistant bacteria are less prevalent in the Netherlands than in other European countries—due perhaps to the careful use of antibiotics. Rigorous implementation of hospital hygiene policies is generally accepted practice in the Netherlands and broad-spectrum antimicrobial agents are strictly reserved for “bad times”.

In the USA, profound changes in hospital practice (eg, shortened hospital stay, reductions in trained staff) may be a major contributor to the spread of new infections and antibiotic resistance, said John McGowan (Atlanta, USA). The concept of a Hospital Epidemiology Service, encompassing all the disciplines required to control infection, was raised by several delegates. But, whether a reduction in antibiotic use in hospitals would influence resistance profiles is not yet clear since resistance genes are in the bacterial population and genetic exchange is common. McGowan’s report that control of vancomycin use in a hospital setting can reduce the carriage of vancomycin-resistant enterococci by 60% gave some scope for optimism.

The use of molecular typing has enabled the tracking of mycobacterial strains in the Netherlands. The data suggest that isoniazid-resistant strains are less transmissible than streptomycin-resistant mycobacteria, noted Jan van Emden (Bilthoven, Netherlands). Molecular techniques have also permitted a better understanding of the Dutch HIV-1 epidemic, reported Jaap Goudsmidt, (Amsterdam, Netherlands). Genetic analysis of the HIV-1 V3 loop has revealed that HIV-1 subtypes found in intravenous drug users are related to US HIV-1 subtypes. 1976 and 1980 have also been identified as start dates for the HIV-1 epidemic in the Dutch homosexual population and drug users, respectively.

Great advances are being made in establishing and strengthening the European microbiological surveillance system. These include: the organisation of an efficient communication network between national centres; an increased use of common microbiological and epidemiological methods; and the establishment of a European training network.

George E Griffin, Jos W M van der Meer

Team approach improves triage of chest pain

A multidisciplinary team has developed a strategy for the rapid triage of patients with chest pain. Their approach has helped to prevent unnecessary hospitalisation of low-risk patients and inappropriate discharge of people with undiagnosed heart attacks.

US emergency departments mistakenly discharge 2–10% of patients with chest pain who are in fact having an acute myocardial infarction (AMI). Mortality among these individuals is nearly twice that of patients with AMI who are admitted to hospital. To avoid potentially lethal errors, liberal admission policies at a cost of approximately US$10–$13 billion per year have been instigated.

The study’s lead author, James Tatum (chair of nuclear medicine and director of nuclear cardiology at Virginia Commonwealth University, Richmond, USA), says, “We asked, how quickly can we get these people through the system in the most cost-effective way?”

An acute cardiac team that included cardiologists, emergency personnel, nurses, and imaging specialists developed and administered an algorithm to everyone arriving at the emergency department with chest pain. All the patients were clinically evaluated on presentation and assigned to one of the five risk categories defined by the triage algorithm. The strategy also included 1 year of follow-up (Ann Emerg Med 1997; 29: 116–25).

In all, 1187 patients were included in the study, and patients with abnormal imaging findings had a significantly higher risk of AMI and subsequent death than those with normal findings.

According to Tatum, the team approach, the development of treatment pathways, and follow-up were the most important elements of the study. “The personnel, the commitment, and the sharing of information are what’s important”, he said.

Norra Macready

Elderly patients benefit from \( \beta \)-blockers

Underprescribing \( \beta \)-blockers to elderly patients after acute myocardial infarction (AMI) is associated with adverse outcomes, report Stephen Soumerai and colleagues (Boston, USA; JAMA 1997; 277: 115–21).

\( \beta \)-blockers improve survival after AMI by 20–40%, and decrease subsequent cardiac morbidity by the same amount. 80% of deaths after AMI occur among elderly patients, but it is not known how often \( \beta \)-blockers are prescribed to this group.

The researchers retrospectively studied 5332 elderly survivors of AMI. Only 21% of those eligible were prescribed \( \beta \)-blockers. But the proportion of patients given calcium-channel blockers increased after AMI from 23% to 49%. The use of \( \beta \)-blockers decreased mortality by 43% and cardiac re-admissions by 22% during the 2-year follow-up. Patients receiving calcium-channel blockers were twice as likely to die as those on \( \beta \)-blockers.

Soumerai speculates that undue concern about side-effects, or extensive marketing of calcium-channel blockers, may have fostered negative attitudes towards \( \beta \)-blockers, even though most physicians are well aware of their potential survival benefits.