Masala

Sepsis kills. Polymerase chain reaction (PCR) or blood culture in sepsis—would it make a difference? A prospective multicentric controlled observational study evaluated the role of PCR for detecting the presence of microbial DNA in blood and its association with disease severity and markers of inflammation (*Intensive Care Med* 2010;**36:**241–7). The presence of microbial DNA was assessed by multiplex PCR upon enrolment, and each time a blood culture was obtained. In severe sepsis, 35% of PCRs were positive compared with 16% of blood cultures. In comparison to patients who had negative PCRs at enrolment, those testing positive had higher organ dysfunction scores and a trend toward higher mortality.

Which pressor is better for treating shock? In a multicenteric European study more than 1600 adult patients with shock that persisted after treatment with adequate volume repletion were randomized to receive dopamine or norepinephrine. The primary end-point was the rate of death at 28 days (*N Engl J Med* 2010;**362:**779–89). However, rates of death at 28 days and time to haemodynamic stability did not differ significantly between the two groups. More patients in the dopamine group experienced arrhythmias. A subgroup analysis revealed that in cardiogenic shock, the death rate at 28 days was significantly higher in those receiving dopamine.

Treating urinary tract infection (UTI) in healthy women—defining a pragmatic approach. A group of studies conducted in various private practice settings of the UK examined the effectiveness of 5 strategies commonly used to eliminate symptoms of UTI: empirical therapy, begun immediately or delayed by 48 hours; targeted antibiotics based on a UTI symptom score, dipstick results (leucocytes, or both nitrites and blood), or culture results from a midstream urine sample (*BMJ* 2010;**340:**c199, c346, c279, b5633, c657). The observations were: there was no significant difference among the strategies in time to amelioration of symptoms; urine culture offered no benefit over empirical therapy in women with uncomplicated UTIs; dipstick strategy was slightly more expensive than empirical therapy but it reduced unnecessary antibiotic use. With regards to symptom duration, antibiotic resistance and no antibiotic use were the most important factors that were associated with prolongation of symptoms.

Aspirin for prevention of cardiovascular events in the general population—wish it were so simple! A low ankle brachial index (ABI) indicates atherosclerosis and an increased risk of cardiovascular and cerebrovascular events. It is likely that subjects who have a low ABI are a high risk group and potentially candidates for preventive treatment. Aspirin for Asymptomatic Atherosclerosis trial was a double-blind randomized controlled trial involving more than 28 000 asymptomatic subjects. Of those, 3350 with a low ABI ($\leq$0.95) were entered into the trial, administered low dose aspirin and followed up for a mean of 8 years. The intervention did not reduce the incidence of the primary end-point which was a composite of initial fatal or non-fatal coronary event or stroke or revascularization (*JAMA* 2010;**303:**841–8).

It is widely felt that elective coronary angiography is overused and has a poor yield. It might just be true. Data from a large registry (American College of Cardiology National Cardiovascular Data Registry) were examined to identify patients without known coronary artery disease who were undergoing elective catheterization. The patients' demographic characteristics, risk factors, and symptoms and the results of non-invasive testing were correlated with the presence of obstructive coronary artery disease (*N Engl J Med* 2010;**362:**886–95). Almost 400 000 subjects were included and obstructive coronary artery disease was found in just over one-third of the patients! Even having a positive result on a non-invasive test was only modestly predictive of having an obstructive coronary artery disease.

Hip fracture is not just a short term mortality risk. According to a meta-analysis that included 24 prospective cohort studies comprising more than 700 000 patients with hip fracture, men at all ages experienced higher mortality after hip fracture than women. The highest mortality risk occurred within the first 3 months, ranging from a 5- to an almost 8-fold relative hazard of death compared with controls. More interestingly, two longer-term cohorts suggested that even 15 years after injury, relative hazard was more than 3 (*Ann Intern Med* 2010;**152:**380–90).

Discharge from the hospital after an acute illness is not the end of the ordeal. The brain is still at risk. Data from a prospective cohort study comprising almost 3000 individuals $\geq$65 years old and without dementia at baseline were examined for an association between acute care and critical illness hospitalization and cognitive function in older adults (*JAMA* 2010;**303:**763–70). The results showed that those who experienced acute care hospitalization and critical illness hospitalization had a greater likelihood of cognitive decline on follow up compared with those who had no hospitalization. Even the non-critical illness hospitalization was significantly associated with the development of dementia on follow up.

Deciphering brain and consciousness. The differential diagnosis of disorders of consciousness is challenging and they are often misdiagnosed in approximately 40% of cases. Even in situations where patient seems unresponsive, wilful modulation of brain activity may be elicited by functional imaging. A study was conducted involving 54 patients with disorders of consciousness. Functional magnetic resonance imaging (MRI) was used to assess each patient's ability to generate wilful, neuroanatomically specific, blood-oxygenation-level-dependent responses during 2 established mental-imagery tasks. A technique was then developed to determine whether such tasks could be used to communicate yes-or-no answers to simple questions. The results showed that a small proportion (~10%) of patients in a vegetative or minimally conscious state have brain activation reflecting some awareness and cognition including feasibility of yes and no response equivalents (*N Engl J Med* 2010;**362:**579–89).

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