Masala

A reliable marker for acute myocardial infarction
Swiss researchers created an algorithm based on the levels of high-sensitivity cardiac troponin (hs-cTn) to allow rapid diagnosis or exclusion of myocardial infarction. In a prospective, multicentre trial, they recruited 872 unselcted patients with acute chest pain and measured the level of hs-cTn at presentation and after 1 hour. Based on hs-cTn levels, an algorithm was derived in 436 randomly selected patients. This was then applied to the remaining 436 patients, who served as a validation cohort. Using this algorithm, 60% of patients were correctly classified as ‘rule-out’, 17% as ‘rule-in’ and the remaining 23% were placed in an ‘observation zone’. This gave a sensitivity of 100% and a specificity of 97%, significantly better than currently available algorithms for diagnosing or excluding myocardial infarction (Arch Intern Med 2012;172:1211–18).

Helpful colleagues boost others’ research
One seldom hears of those who may not be leaders in publishing but whose unselfish help has often boosted their colleagues’ work. Oettl from the Georgia Institute of Technology used software to examine all acknowledgements from the Journal of Immunology from 1950 to 2007. Using obituaries from over 400 000 immunology articles, a list was made of 149 authors who had died, along with a list of their co-authors. These authors were categorized as helpful, highly productive, less helpful and less productive. The publications of their co-authors were compared before and after the individual died. The number of papers these co-authors published after the death of the index author declined by 22% in case of the most productive and most helpful authors and 20% in case of less productive but helpful authors. Co-authors of highly productive and helpful authors received 21% fewer citations after the death of the author. This suggests a decline in both research output and quality following the death of a helpful colleague (Nature 2012;489:496–7).

Children born to older mothers do well
Women are increasingly opting to have children at an older age. Researchers from the UK used data from the Millennium cohort study and the National Evaluation of Sure Start Study (2001–07) to study the effect of maternal age at childbirth and children’s health at age 9 months (31 257 children), followed till 3 years. With increasing maternal age (range 13–57 years), there was a decline in the risk of children getting unintentional injuries needing medical attention. Immunization rates at 9 months of age increased from 94.6% for mothers aged 20 years to 98.1% for mothers aged 40 years. At all times, language development was better in children with higher maternal age. Reassuring data, notwithstanding the higher risk of chromosomal defects in children born to older women (BMJ 2012;345:e5116. doi:10.1136/bmj.e5116).

Intra-aortic pumps in cardiogenic shock
Intra-aortic balloon counterpulsation (IABP) has long been considered a therapy of choice in patients with cardiogenic shock following a myocardial infarction. A randomized, prospective, open-label, multicentre trial assigned 600 such patients to IABP group (301 patients) or no IABP, i.e. control group (299 patients). All patients were expected to undergo early revascularization. At 30 days, 119 patients in the IABP group (39.7%) and 123 patients in the control group (41.3%) had died (relative risk with IABP 0.96; 95% CI 0.79–1.17; p=0.69). Rates of major bleeding, peripheral ischaemia, sepsis, stroke, length of stay in the intensive care unit and renal function were comparable in the two groups. It is time to question the recommendation for using IABP in this patient population (N Engl J Med 2012;367:1287–96).

Predicting rheumatoid arthritis
Do elevated levels of rheumatoid factor (RF) predict the future development of rheumatoid arthritis (RA) in asymptomatic individuals? Danish researchers used data from the Copenhagen city Heart Study to answer this question. This was a prospective cohort study in which blood samples were obtained from 9712 white Danish individuals between 1981 and 1983. Follow-up continued till August 2010. Baseline RF levels were stratified as: 25–50, 50.1–100, >100 versus <25 U/ml. Over 187 659 person-years of follow-up, RA developed in 183 individuals. The incidence of RA increased with increasing baseline RF levels with hazard ratios for RA being 3.6, 6.0 and 26 for levels 25–50, 50.1–100 and >100, respectively. High titre of RF may help predict the risk for developing RA in later life (BMJ 2012;345:e5244. doi:10.1136/bmj.e5244).

Multivitamins and heart disease
Multivitamin tablets are believed to protect against several diseases including cardiovascular disease. In the Physicians’ Health Study II, a double-blind, placebo-controlled trial involving 14 641 male US physicians (mean age 64.3 years), participants were randomized to a daily multivitamin pill or a placebo. After a median follow-up of 11.2 years, there were 1732 confirmed major cardiovascular events. The incidence of myocardial infarction, stroke, cardiovascular mortality and total mortality did not differ between the two groups (JAMA 2012;308:1751–60). Should one pause before reaching for that multivitamin pill?

It’s never too late...
Why do some people go on to live longer than others? Data from the Swedish Kungsholmen project sheds some light on this. A total of 1810 participants aged 75 years or older were followed up for 18 years with the main outcome being the median age at death. During this period, 1661 (91.8%) participants died. Half of the participants lived for over 90 years. Half of the current smokers died a year earlier than non-smokers. Those who regularly swam, walked or did gymnastics (!) lived a median of 2 years longer than those who did not. Those with the lowest risk profile (healthy lifestyle, participation in at least one leisure activity and a rich or moderate social network) lived on average 5.4 years longer than those with the highest risk profile. This held good even among those older than 85 years (BMJ 2012;345:e5568. doi:10.1136/bmj.e5568).

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