

MINERVA

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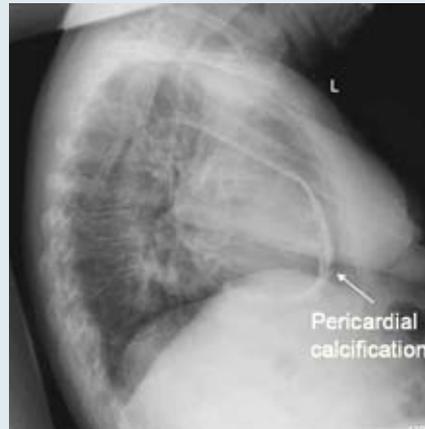
A 39 year old woman with shortness of breath and difficulty swallowing
Try the picture quiz in **ENDGAMES, p 1091**

When very obese patients undergo bariatric surgery they gain more than a better figure: they also seem to experience an improvement in severe migraine headaches. A prospective observational study of 24 patients with migraine who were undergoing bariatric surgery showed reductions in severity of migraine and in the number of days with headache. No mechanism to explain these observations was offered, but the authors wonder if more modest, behaviourally generated weight losses could bring about similar improvements (*Neurology* 2011;76:1135-8, doi:10.1212/WNL.0b013e318212ab1e).

Studies indicate that drug eluting stents are associated with less risk at the time of the intervention than coronary bypass grafting, but carry a greater need for later revascularisation. In a large meta-analysis, 25 randomised and non-randomised comparative studies were assessed, with data from over 34 000 patients. As seen with observational studies, drug eluting stents were associated with lower rates of all cause mortality at 30 days, stroke, and major adverse cardiac and cerebrovascular events, while bypass grafting had a lower risk of major adverse effects at 12 months and lower need for revascularisation (*Journal of Thoracic and Cardiovascular Surgery* 2011;141:1134-44, doi:10.1016/j.jtcvs.2010.07.001).

If subclinical inflammation is a possible factor underlying cancers and cardiovascular disease, could simple indices of inflammation predict these types of disorder? A prospective open cohort study measured white cell counts, erythrocyte sedimentation rates, and serum globulin levels in 1192 white men, and found that the resulting score predicted both cancer and cardiovascular mortality 20 years later. The risks associated with a high inflammation score were on a par with those associated with smoking for cancer, or having a cholesterol level above 6.2 mmol/L for heart disease (*QJM* 2011;104:387-94, doi:10.1093/qjmed/hcq213).

Rate of readmission to hospital is currently seen as a marker of "quality of care," with its prevention viewed as a way to save money. A systematic review of studies that measured the proportion of readmissions that were deemed avoidable reports that the median proportion was 27.1% (range 5% to 79%) and that all but



A 77 year old white man presented with septic shock secondary to cellulitis and was admitted to intensive care. He had had similar previous admissions. He responded well to intravenous antibiotics. His lateral chest radiograph showed

three of the studies used subjective criteria to determine whether readmissions were avoidable. The literature, it seems, leaves us no clearer about how to avoid readmissions (*CMAJ* 2011;183:E391-402, doi:10.1503/cmaj.101860).

Patients with breast cancer who develop vaginal atrophy related to aromatase inhibitor treatment face uncertainty about whether using local oestrogens to tackle the atrophy could interfere with the efficacy of the cancer therapy. A phase I/II study used vaginal testosterone cream instead, and found that a four week course was associated with improved signs and symptoms of vaginal atrophy related to aromatase inhibitor treatment, without increasing levels of either oestrogen or testosterone (*Oncologist* 2011;16:424-31, doi:10.1634/theoncologist.2010-0435).

It's been assumed that the serotonin involved in fetal forebrain development comes from the mother, but new findings suggest that the placenta is the source. Using new genetic tools, scientists have shown that tryptophan metabolic pathways in the placenta that produce serotonin from a maternal tryptophan precursor contribute significantly to this source of serotonin in both mice and humans; alterations to the pathway may affect placental serotonin synthesis and in turn fetal forebrain development. They conclude

a thick curvilinear calcification, consistent with pericardial mural calcification, and his previous episodes were attributed to restricted ventricular filling owing to constrictive pericarditis. This condition impairs cardiac response to stressful conditions such as sepsis. It is defined as impedance to diastolic filling caused by a fibrotic pericardium, and most patients present with symptoms of heart failure. Echocardiography for these patients is being replaced by techniques such as tissue doppler imaging and 2D-speckle tracking.

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Patient consent not needed (patient anonymised, dead, or hypothetical).

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that maternal-placental-fetal interactions could underlie the important effect of serotonin on mental health (*Nature* 2011;472:347-50, doi:10.1038/nature09972).

Coffee consumption has been inconsistently implicated in the incidence of heart failure. A large prospective observational study of middle aged and older women who were already participating in the Swedish Mammography Cohort and who did not have heart failure, diabetes, or heart disease at baseline found no association between coffee drinking and new heart failure events in this population (*Circulation: Heart Failure* 2011, doi:10.1161/CIRCHEARTFAILURE.111.960898).

A rare complication of diabetic ketoacidosis is pneumomediastinum. The case of an 18 year old student with type 1 diabetes who developed a pneumomediastinum without evidence of a pneumothorax is described in *Clinical Diabetes* (2011;29:76-7). Pneumomediastinum is commonly caused by alveolar rupture, secondary to alveolar overdistension and barotrauma. In diabetic ketoacidosis, a deep ketotic hyperventilation pattern may lead to increases of 20-30 mm Hg in alveolar pressure, which may be enough to cause alveolar rupture. Vomiting and retching are common in ketoacidosis, and these may also raise intrathoracic pressure.

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