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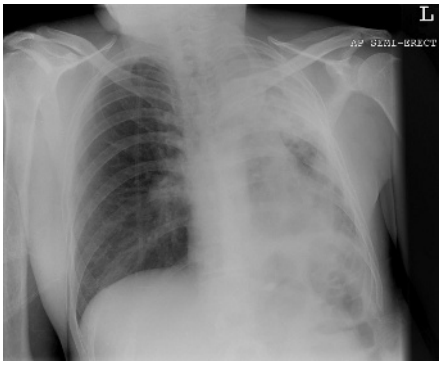
Hyperglycaemia with acute non-invasive ventilation

It is well recognised that hyperglycaemia is associated with poor outcome in the intensive care unit, although it is not known whether hyperglycaemia affects outcome in patients treated with non-invasive ventilation for acute hypercapnic respiratory failure. In this issue, Chakrabarti and colleagues report a study evaluating the affect of hyperglycaemia on outcome and show that random blood glucose ⩾7 mmol/l, baseline respiratory rate and admission APACHE (Acute Physiology and Chronic Health Evaluation) II score predicted outcome. Baseline respiratory rate and hyperglycaemia were similar in predicting outcomes to the APACHE II score and combinations of these variables improved predictive accuracy. In the accompanying editorial, Baker and Bell point out that blood glucose measurement during chronic obstructive airways disease (COPD) exacerbations should be measured routinely and this is not part of the NICE COPD guidelines published in 2004, although they also conclude that further study is required to evaluate whether tight glycaemic control affects outcome. ***See pages 830 and 857***

Risk after acute pulmonary embolism

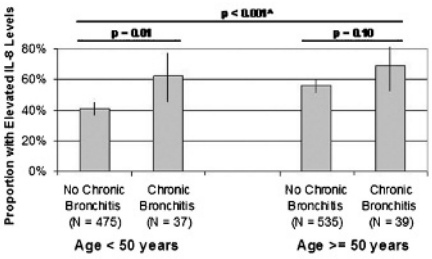
As Fisher and Corris point out in this month's Thorax, stratification of mortality and morbidity risk in normotensive patients who present with acute pulmonary embolism (PE) is not clear. Lega and colleagues report a meta-analysis of B-type natriuretic peptides (BNP and NT-proBNP) alone or in conjunction with troponins on outcome in acute PE. They show that raised B-type natriuretic peptides identify a subset of patients with acute PE at higher risk for mortality and adverse outcomes. Where natriuretic peptides were elevated, increased troponins were also an independent prognostic marker. Fisher and Corris conclude that this information needs to be incorporated into the design of clinical trials to assess outcome in PE. ***See pages 833 and 869***



See Pulmonary puzzle ***page 862***.

Outcome of chronic bronchitis before age 50

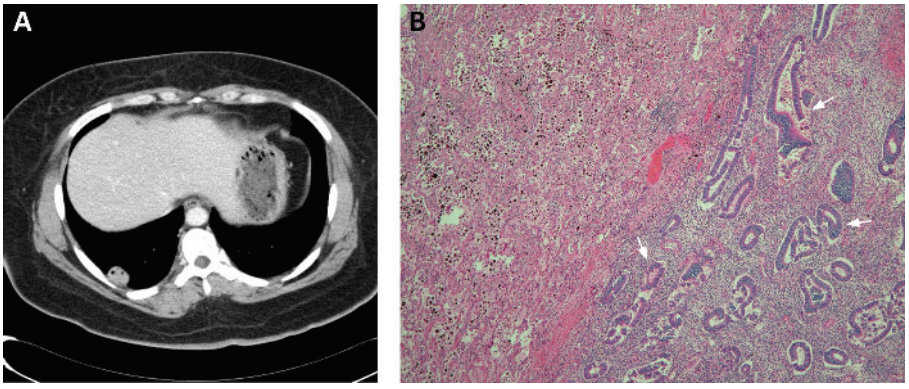
There has been much debate about the effect of chronic bronchitis in young adults and subsequent development of airflow obstruction. Guerra and colleagues show that among adults aged <50 years old, chronic bronchitis at enrolment significantly increased the risk for incident airflow limitation and all-cause mortality but, interestingly, not in subjects >50 years old. Chronic bronchitis was associated with increased IL-8 and C-reactive protein only in those <50 years old. Thus, adults <50 years old with chronic bronchitis are susceptible to the development of COPD and this susceptibility may be partly associated with systemic inflammation. ***See page 894***



Proportion (and 95% CIs) of subjects with elevated interleukin (IL-8) levels above median by age and chronic bronchitis.

CT changes in advanced cystic fibrosis

Although lung disease is the main cause of morbidity and mortality in cystic fibrosis (CF), there is little information on the spectrum of CT changes in severe advanced lung disease in CF. In this issue, Loevee and colleagues report on a CT scoring system that can be used in these patients and they show a wide spectrum of lung abnormalities on CT from predominantly an infection/inflammation pattern to air trapping/hypoperfusion. These observations will be valuable in sub-typing patients with CF and further studies are required to evaluate whether they have prognostic value in the condition. ***See page 876***



(A) CT scan of the chest demonstrated a well-demarcated subpleural ovoid tumour with eccentric cavitations at the right lower lobe. (B) Microscopic examination of the lung nodule revealed abundant ectopic endometrial glands (arrows) with stroma. (See Images in Thorax ***page 919***.)