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Steps towards cost-benefit analysis of regional neurosurgical care

Knowing the costs of running a regional neurosurgical unit and their relation to outcome has been made more urgent by recent changes in legislation. On p 629 Pickard *et al* present a retrospective analysis of one year's admissions in Wessex and find that 243 deaths or severe disabilities were averted—at an average cost of £7325 (range £5000 to £70 000). The cost per quality adjusted life year was unexpectedly low for most conditions, but if cost effectiveness is to be used as a factor in selecting patients for neurosurgical care then society may have to accept attitudes that conflict with the more traditional humane approach.

Sodium-lithium countertransport activity in red cells

The factors that predispose a large subset of diabetic patients to nephropathy are still not elucidated. Though glycaemic control may play an important part, it is unlikely to be the sole determinant. Recently diabetic nephropathy has been shown to cluster in families, and the parents of patients with insulin dependent diabetes and proteinuria have been found to have higher blood pressures than parents of patients with diabetes and normoalbuminuria. On p 635 Walker *et al* take the study of familial factors further by comparing sodium-lithium countertransport activity in red cells, a marker of risk for essential hypertension, in two matched groups of diabetic patients, one with and one without persistent proteinuria, and their parents. They confirmed a higher countertransport activity in the patients with diabetes with proteinuria than in those without and also found a higher activity in the parents of the patients with proteinuria than in the parents of the patients with normoalbuminuria. There was a correlation between countertransport activity in the parents and that in their offspring when all subjects were studied. This evidence lends further support to the concept that familial, and possibly genetic, factors related to the predisposition to arterial hypertension have a role in the susceptibility to diabetic renal disease.

Prediction of hip fractures in elderly women

Retrospective studies suggest that osteoporosis is a risk factor for hip fracture, but a tendency to fall and the neuromuscular response may also be important. On

p 638 Porter *et al* describe a prospective study of hip fracture in 1414 ambulant women aged 70 or over, living in residential homes for the elderly or in geriatric care in Doncaster and Hull. They were assessed for osteoporosis with broad band ultrasonic attenuation of the os calcis (BUA index), for cognisance with the Clifton assessment procedures for the elderly test, for mobility, and for hip fracture in the subsequent two years. Women who sustained a fracture were slightly older than those who did not, a difference that approached significance ($p=0.07$). Their BUA index was significantly less ($p<0.001$), and they had a significantly lower score on testing for cognisance ($p<0.001$); these two variables had independent associations with fracture of the hip. Women with hip fractures were also significantly more mobile ($p<0.002$). The women most at risk of hip fracture were those with low ultrasonic attenuation index of the os calcis, low cognisance test score, and high mobility. The authors conclude that improvement in cognisance, as well as in bone strength, may reduce the incidence of hip fracture. Broad band ultrasonic attenuation of the os calcis may be able to predict which menopausal women will be at risk of fractures.

Course of women with dyskaryotic cervical smears

The successful implementation of the cervical cytology screening programme in the United Kingdom includes adequate management of women who are found to have dyskaryotic smears suggestive of early cervical intraepithelial neoplasia (grades I and II) and more borderline abnormalities. On p 641 Fletcher *et al* report on a cohort of 666 such women followed up cytologically for four and a half years. Forty five women (6.8%) had a subsequent abnormal smear suggestive of cervical intraepithelial neoplasia grade III or invasive cancer. There was a significant excess of invasive cancers in the series compared with the background population (five cases compared with less than 0.1 expected; $p<0.0001$). One hundred and fifty seven women (24%) showed reversion to a normal cell pattern sustained in several smears over more than 18 months but a single negative smear was an unreliable indicator of apparent regression. Having two successive smears showing mild dyskaryosis or a smear at any time showing moderate dyskaryosis was a significant predictor of a subsequent severely dyskaryotic smear ($p<0.001$). Although this study clearly indicates the importance of following up women with dyskaryotic smears, the optimum management of these patients—by cytology or colposcopy—needs to be determined by randomised controlled trials.