Short cuts

What's new in the other general journals

Zambia and Kenya scale up detection and treatment of HIV

An estimated 16% of adults in Zambia are infected with HIV. In the Zambian capital Lusaka 22% of adults are infected. In 2004 the Zambian government started a programme of delivering antiretroviral treatment to people in need. Previously, the treatment had been available through private insurance only. The programme depends largely on primary care practices and nurses, and on non-physician clinical officers.

In the first year and a half of the programme, more than 20 000 adults were enrolled into care and about three quarters of them received antiretroviral treatment. With high rates of uptake and adherence and a good response to treatment, the programme seems feasible and continues to expand delivery of care. By April 2006 it enrolled nearly 40 000 people infected with HIV.

In Kenya, about 9% of adults are infected with HIV, but three quarters of adults do not know their HIV status. In 2000, there were only three centres where people could get a test. Since then, the provision and use of voluntary HIV counselling and testing has expanded rapidly: by the end of 2005 there were nearly 700 centres countrywide. Research has shown that voluntary counselling and testing reduces risky health behaviour.

JAMA 2006;296:782-93, 296:855-8

HIV positive mothers in Africa shouldn't stop breast feeding

Preventing transmission of HIV from infected mothers to their newborns in Africa needs to balance the benefits of breast feeding against the risk of HIV transmission. A trial in Botswana randomised 1200 women and their newborns to formula feeding and one month of zidovudine or exclusive breast feeding and six months of zidovudine.

At seven months, significantly fewer babies randomised to formula were infected with HIV (5.6% *v* 9.0%, respectively; *P* = 0.04), but mortality was lower in the group randomised to breast feeding (9.3% *v* 4.9%; *P* = 0.003). At 18 months, rates of infection with HIV in babies who survived were similar between the groups. Strategies for prevention of mother to child transmission of HIV in developing countries that include exchanging breast feeding for formula feeding need to assess how well childhood diseases such as diarrhoea and respiratory illnesses are managed in the local setting.

Highly active antiretroviral therapy was not available at the beginning of the study. After it became available, the treatment was offered to all babies infected with HIV and to mothers who had AIDS or a CD4 cell count $< 200 \times 10^6/l$. It is encouraging that, in this study, none of the 34 breastfed babies whose mothers had the highly active antiretroviral therapy since delivery were infected with HIV, but future research

should assess the preventive potential of the treatment on transmission of HIV through breast feeding.

JAMA 2006;296:794-805

A step closer to uniform reporting of estimated glomerular filtration rate

Several guidelines recommend that laboratories compute and report the estimated glomerular filtration rate whenever serum creatinine is measured. This should facilitate early detection of chronic kidney disease, which has recently been recognised as a public health problem.

However, computing estimated glomerular filtration rate requires calibration of the creatinine assay to the laboratory that developed the equation. To move towards a more uniform reporting of the rate based on a standardised creatinine assay, researchers from the modification of diet in renal disease study revised equations that had been developed from the study. Data, including glomerular filtration rate measured by urinary clearance of ^{125}I -iothalamate, from 1628 patients from 15 clinical centres were used to adjust the equations to a standardised assay and to measure their accuracy.

The equation that takes into account four variables—age, sex, ethnicity, and serum creatinine—seems to perform as well as the one based on a six variable equation, which also takes into account serum levels of urea and albumin. Both equations performed better than the still much used Cockcroft-Gault equation. The authors discuss when and how clinicians must be cautious in interpreting estimated glomerular filtration rate.

Ann Intern Med 2006;145:247-54

Use Alendronate to prevent steroid induced bone loss in rheumatic diseases

Alendronate is more effective than alfacalcidol at preventing bone loss in patients who are taking glucocorticoids for their rheumatic disease. Of the 201 people included in a double placebo randomised trial, one third had rheumatoid arthritis, one third had polymyalgia rheumatica, and the rest had another rheumatic disease. All patients were taking an equivalent of at least 7.5 mg of prednisolone daily.

For prevention of bone loss, patients were randomised to receive alendronate and a placebo alfacalcidol pill or alfacalcidol and a placebo alendronate pill. After 18 months, the mean difference in the change in bone mineral density between the two groups was 4% (95% CI 2.4% to 5.5%). The bone mineral density of the lumbar spine, femoral neck, and total hip increased compared with baseline in people randomised to alendronate, whereas it decreased in the alfacalcidol group. Both treatments were well tolerated.

Alendronate, which is a bisphosphonate, inhibits resorption of the bone by inducing apoptosis of osteoclasts. Active vitamin D₃ analogues, such as alfacalcidol, improve the creation of bone by stimulating the formation and action of osteoblasts. Studies have shown that alendronate and alfacalcidol were equally effective at preventing bone loss induced by glucocorticoids in people after renal or cardiac transplantation.

N Engl J Med 2006;355:675-84

SAFE strategy controls trachoma in Africa

Trachoma, caused by ocular infection with *Chlamydia trachomatis*, is the leading cause of preventable blindness worldwide. In countries where it is endemic the World Health Organization recommends the use of the SAFE strategy (surgery for cases of trichiasis, antibiotics to treat the community pool of infection, face washing to reduce transmission, and environmental change—that is, improved access to water and sanitation) for controlling trachoma.

A study evaluated the effect of field activities in southern Sudan three years after the start of the SAFE programme in four intervention areas. The uptake of the measures of the programme varied greatly between the areas: surgical coverage varied from 0.5% to 6%, antibiotic uptake from 14% to 75%, health education from 49% to 90%, and latrine coverage from 3% to 16%. Where measures had taken root, rates of trachoma and hygiene improved, but in areas with low uptake of antibiotics and education no marked differences were seen at three years compared with baseline.

A randomised trial assessed the added value of insecticide spraying for fly control in Kongwa, Tanzania, where the programme is also implemented. Spraying with insecticide significantly reduced the number of flies, but it did not further reduce the rates of trachoma, which had been reduced fivefold to 10-fold with SAFE measures. Authors of both studies emphasise the importance of unmeasured collateral benefits of the SAFE strategy on other infectious diseases such as diarrhoea, helminthiasis, pneumonia, and malaria.

Lancet 2006;368:589-95, 596-600

Stop using BMI as a measure of cardiovascular risk

Although obesity is clearly a risk factor for developing coronary heart disease, observational studies looking at the association of body mass index with mortality and cardiovascular events in people with coronary artery disease have been giving conflicting results. A systematic review found 40 studies that included > 250 000 people who were followed up for a mean of nearly four years.

Surprisingly, overweight people had the lowest risk for total mortality and cardiovascular mortality compared with people with a normal body mass index (relative risk 0.87, 95% CI 0.81 to 0.94 and 0.88, 0.75 to 1.02, respectively). People with lower than normal weight (body mass index < 20) were at increased risk compared with normal weight, whereas morbid obesity (body mass index ≥ 35) carried the highest risk of cardiovascular mortality but it was not associated with an increased risk of overall mortality.

The commentary (p 624) discusses possible explanations for the paradoxical findings and states that we should stop using body mass index as a measure of cardiovascular risk. The inability of body mass index to distinguish between fat and lean mass seems to be the most likely explanation of the findings, as it doesn't seem biologically plausible that extra body weight might be protective for people with coronary artery disease.

Lancet 2006;368:666-78

Altered radiotherapy improves outcomes in head and neck cancer

A meta-analysis of more than 6500 individual patients' data reported in 15 randomised trials showed that, compared with conventional radiotherapy, altered fractionated radiotherapy improved overall survival, reduced the rates of dying from head and neck cancer, and improved locoregional and local control of the disease. Compared with conventional treatment, the altered regimens deliver a higher dose of radiation over the same time, the same dose in fewer weeks, or a smaller dose over a greatly reduced time of treatment.

The benefits of altered treatments in treating non-metastatic head and neck squamous cell cancer were most pronounced in local control of the disease, whereas control of regional lymph nodes was less improved. Hyperfractionated radiotherapy, with increased total dose, offered most advantages over conventional radiotherapy and other types of altered radiotherapy. Compared with conventional therapy, it increased survival at five years by 8%.

The effects were modified by age, with younger patients benefiting more from altered radiotherapy than older patients. Altered radiotherapy regimens have the potential to be more toxic than conventional treatment, but data in this systematic review were too heterogeneous to assess the tolerability of the regimens.

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