Abstracts

Options for managing low-grade cervical abnormalities

The optimal management of patients with low-grade abnormalities detected on screening (borderline nuclear abnormalities or mild dyskaryosis) has been the subject of debate. Two alternatives have been advocated, i.e. cytological surveillance (further smear tests at regular intervals) or immediate referral for colposcopic examination. When low-grade abnormalities are viewed at colposcopy, some clinicians favour a policy of 'see and treat', whereby immediate excision, if indicated, is carried out during a single visit. Others prefer a more conservative approach, whereby one or more biopsies are taken at the initial colposcopy, with women returning for treatment at a later date as necessary.

The results of the TOMBOLA group study have recently been published in the *British Medical Journal*. The study was designed to estimate the cost effectiveness of alternative methods of managing low-grade cervical cytological abnormalities detected at routine screening. The study took place in three centres in the UK and the participants were 4 201 women with low-grade abnormalities.

Interventions used were cytological surveillance or referral to colposcopy for biopsy and recall if necessary, or referral to colposcopy with immediate treatment based on colposcopic appearance.

Data on resource use were collected from participants throughout the duration of the trial (36 months), enabling the estimation of both the direct (health care) and indirect (time and travel) costs of management. Quality of life was assessed at recruitment and at 12, 18, 24, and 30 months. Economic outcomes were expressed as costs per case of cervical intraepithelial neoplasia (grade II or worse) detected, by trial arm, as confirmed at exit, and cost utility ratios (cost per quality-adjusted life year (QALY) gained) for the three pair-wise comparisons of trial arms.

The mean 3-year discounted costs of surveillance, immediate treatment, biopsy and recall were £150.20 (€177, $249), £240.30 (€283, $415), and £241.10 (€284, $400), respectively, viewed from the health service perspective. From the social perspective, mean discounted costs were £204.40 (€241, $339), £339.90 (€440, $563), and £327.50 (€386, $543), respectively. Estimated at the means, the incremental cost-effectiveness ratios indicated that immediate treatment was dominated by the other two management methods, although it did offer the lowest cost per case of cervical intraepithelial neoplasia detected and treated. The pronounced skews in the distributions indicated that probabilistic uncertainty analysis would offer more meaningful estimates of cost effectiveness. The observed differences in the cost-effectiveness ratios between trial arms were not significant.

Judged within the time frame of the TOMBOLA evaluation, there is no compelling economic reason to favour any one follow-up method over either of the others.

TOMBOLA group. *BMJ* 2009; 339: b2549.

Effect of the Integrated Management of Childhood Illness in rural Bangladesh

The Integrated Management of Childhood Illness (IMCI) strategy was launched in the mid-1990s by WHO and UNICEF to reduce deaths due to diarrhoea, pneumonia, malaria, measles, and malnutrition, which accounted for an estimated 70% of all global deaths of children younger than 5 years at that time. A multicountry evaluation of IMCI began in 1997 to measure its effect on health and its cost effectiveness.

Shams Arifeen and colleagues assessed the effect of IMCI on health and nutrition of children younger than 5 years in Bangladesh.

In this cluster randomised trial, 20 first-level government health facilities in the Matlab subdistrict of Bangladesh and their catchment areas (total population about 350 000) were paired and randomly assigned to either IMCI (intervention; 10 clusters) or usual services (comparison; 10 clusters). All three components of IMCI – health worker training, health systems improvements, and family and community activities – were implemented at the beginning of February 2002. Assessment included household and health facility surveys tracking intermediate outputs and outcomes, and nutrition and mortality changes in intervention and comparison areas. Primary endpoint was mortality in children aged between 7 days and 59 months.

The yearly rate of mortality reduction in children younger than 5 years (excluding deaths in the first week of life) was similar in IMCI and comparison areas (8.6% v. 7.8%). In the last 2 years of the study, the mortality rate was 13.4% lower in IMCI than in comparison areas (95% CI −14.2 to 34.3), corresponding to 4.2 fewer deaths per 1 000 live births (95% CI −4.1 to 12.4; p=0.30). Implementation of IMCI led to improved health worker skills, health system support, and family and community practices, translating into increased care seeking for illnesses. In IMCI areas, more children younger than 6 months were exclusively breastfed (76% v. 65%, difference of differences 10.1%, 95% CI 2.65 - 17.62), and prevalence of stunting in children aged 24 - 59 months decreased more rapidly (difference of differences −7.33, 95% CI −13.83 to −0.83) than in comparison areas.

IMCI was associated with positive changes in all input, output, and outcome indicators, including increased exclusive breastfeeding and decreased stunting. However, IMCI implementation had no effect on mortality within the time frame of the assessment.

Arifeen SE, *et al. Lancet* 2009; 374: 393-403.

Treatment of uncomplicated malaria in Uganda

Jane Achan and colleagues, from Makerere University, Uganda, looked at comparing the effectiveness of oral quinine with that of artemether-lumefantrine in treating uncomplicated malaria in children. They used a randomised, open-label effectiveness study in the outpatient clinic of Uganda's national referral hospital in Kampala. The participants were 175 children aged 6 - 59 months with uncomplicated malaria.

Participants were randomised to receive oral quinine or artemether-lumefantrine administered by caregivers at home.

The primary outcomes were parasitological cure rates after 28 days of follow-up unadjusted and adjusted by genotyping to distinguish recrudescence from new infections. Secondary outcomes were adherence to study drug, presence of gametocytes, recovery of haemoglobin concentration from baseline at day 28, and safety profiles.

Using survival analysis the cure rate, unadjusted by genotyping, was 96% for the artemether-lumefantrine group compared

with 64% for the quinine group (hazard ratio 10.7, 95% confidence interval 3.3 - 35.5, p=0.001). In the quinine group 69% (18/26) of parasitological failures were due to recrudescence compared with none in the artemether-lumefantrine group. The mean adherence to artemether-lumefantrine was 94.5% compared with 85.4% to quinine (p=0.0008). Having adherence levels of 80% or more was associated with a decreased risk of treatment failure (0.44, 0.19 - 1.02, p=0.06). Adverse events did not differ between the two groups.

The effectiveness of a 7-day course of quinine for the treatment of uncomplicated malaria in Ugandan children was significantly lower than that of artemether-lumefantrine. These findings question the advisability of recommending quinine therapy for uncomplicated malaria in Africa.

Achan J, *et al. BMJ* 2009; 339: b2763.

BRIDGET FARHAM

Single Suture

Organic food – all hype?

An independent review, commissioned by the Food Standards Agency (FSA) in the UK, published at the end of July, shows that there are no nutritional differences between organic foods and those grown by conventional farming. The focus of the review was on nutritional content.

Gill Fine, FSA Director of Consumer Choice and Dietary Health, said: 'This study does not mean that people should not eat organic food. What it shows is that there is little, if any, nutritional difference between organic and conventionally produced food and that there is no evidence of additional health benefits from eating organic food.

The study, which took the form of a 'systematic review of literature', was carried out by the London School of Hygiene and Tropical Medicine (LSHTM). LSHTM's team of researchers, led by Alan Dangour, reviewed all papers published over the past 50 years that related to the nutrient content and health differences between organic and conventional food. This systematic review is the most comprehensive study in this area that has been carried out to date. It was split into two separate parts, one of which looked at differences in nutrient levels and their significance, while the other looked at the health benefits of eating organic food.

Dr Dangour, of the LSHTM's Nutrition and Public Health Intervention Research Unit, and the principal author of the paper, said: 'A small number of differences in nutrient content were found to exist between organically and conventionally produced crops and livestock, but these are unlikely to be of any public health relevance. Our review indicates that there is currently no evidence to support the selection of organically over conventionally produced foods on the basis of nutritional superiority.'

http://www.food.gov.uk/news/newsarchive/2009/jul/organic

Single Suture

Subliminal advertising draws smokers

Would selling cigarettes in plain grey packaging make a difference to whether or not smokers bought them? David Hammond and Carla Parkinson at the University of Waterloo in Ontario, Canada, think so. They created fictitious cigarette packets with words now commonly used on real packets, such as 'smooth' or 'silver'. When shoppers in Ontario were asked to select the healthiest brands, they usually picked those with light-coloured packaging or which carried words subliminally suggestive of good health. The suggestion is that consumers think that some brands are less harmful than others and that the packaging is contributing to this.

Many countries are now considering standardising cigarette packaging as a result. This comes after more than 40 countries have banned tobacco companies from advertising brands as 'low tar' or 'mild' following research showing that all brands are equally harmful.

Hammond E, Parkinson C. *J Public Health* 2009: published online 27 July.