News

WHO, L. Taylor

In Africa, where children are the main victims of malaria, delivery of antimalarial drugs through routine vaccination programmes is a promising new approach.

Intermittent drugs seen highly protective against malaria

Malaria drugs given intermittently at the same time as routine childhood vaccinations could cut malaria episodes by nearly two-thirds, according to a randomised, placebo controlled trial reported in the 12 May issue of *The Lancet*.

Dr David Schellenberg and colleagues from the Hospital Clinic in Barcelona, Spain, and the Ifakara Health Research and Development Centre, United Republic of Tanzania, randomly assigned either sulpha-doxine-pyrimethamine, a commonly used antimalarial drug combination, or placebo to 701 infants living in a rural area of the United Republic of Tanzania. The treatment was given at 2, 3 and 9 months of age alongside routine vaccinations delivered through WHO's Expanded Programme on Immunization (EPI). All the children also received iron supplementation between 2 and 6 months of age.

The Ifakara area where the trial was conducted has a high rate of malaria transmission and malaria is especially severe in under-1-year-old children. The treatment, the study found, reduced the rate of clinical malaria by 59%, the rate of severe anaemia by 50%, the number of hospital admissions by 30%, and the rate of all febrile episodes by 13%. The treatment was well tolerated and no drug-attributable side-effects were observed.

Professor Pedro Alonso, head of epidemiology and international health at the Hospital Clinic Barcelona, and one of the study authors, told the *Bulletin*: "This drug costs less than 20 cents and our approach to using it makes use of existing contacts between the target population and health care workers. So this approach appears to be an extremely good buy."

One concern about using chemopro-phylaxis is that drug resistance may develop. However, Alonso argues that because the treatment is directly observed there can be no under-dosing, with its associated increased risk of inducing resistance. "And the drug is only given in three doses, so it is unlikely to constitute a major contribution to the problem of resistance when you consider the large quantities of malaria drugs consumed in countries with high rates of malaria."

During a previous trial in the same area, full chemoprophylaxis between 2 and 12 months was associated with a large increase in the rate of malaria once treatment stopped, suggesting that the development of malaria-specific immunity had been delayed. However, no such rebound effect was seen in this study. "Because the children received only intermittent treatment they developed their own immunity to malaria just like those in the placebo group," says Alonso. "Once the treatment stops the children will still go on to get malaria but they have been protected when they are most vulnerable."

Professor Brian Greenwood, head of the malaria centre at the London School of Hygiene and Tropical Medicine, comments: "This is a very important study. The difficulty in the past has been finding the right balance between protecting children from malaria at the most vulnerable time without impair-ing their natural immunity. This approach seems to have got it right."

Greenwood is currently participating with Ghanaian colleagues in a similar study in the north of Ghana, which is due to be completed in 18 months' time. "Hopefully our study, which has larger numbers, will provide independent confirmation about the value of intermittent drug treatment." ■

Jacqui Wise, *London, UK*

Drug-resistant HIV increasing, UK study finds

Over a quarter of people newly infected with HIV in the UK and not yet receiving treatment may be carrying mutant virus strains already resistant to antiretroviral drugs, according to a study reported in the 5 May issue of the *British Medical Journal*.

The study, which was conducted by the UK collaborative group on monitoring the transmission of HIV drug resistance, used genetic tests to measure viral drug resistance within 18 months of infection in 69 subjects who contracted the virus between 1994 and 2000. The researchers detected *primary* resistance to antiviral drugs — that is, in individuals not yet treated with drugs — in 14% of cases over the seven-year period. Of the 26 patients tested last year, seven, or 27%, had a resistant virus. A calculation of the risk of primary infection with drug-resistant virus suggested a steady increase since 1994, reaching a risk of about one in five by last year.

Corresponding author of the study Dr Deenan Pillay, with the UK's Public Health Laboratory Service and Birmingham University Medical School, notes that "the results are based on small numbers of patients and have therefore wide confidence intervals, so they should be taken as only indicative of what seems to be a disturbing trend". That trend, the researchers believe, is probably fuelled by the increasing use of antiretroviral drugs in the UK. Another contributing factor, they say, could be the