

Spotlight

Who will champion the cause of TB among children?

Henry Neondo, Kenya

An article from the HDN Key Correspondent Team

Deciding to start an organisation that would provide care for the sick was easy, according to Ria Grant, Director of the TB Care Association in Cape Town, South Africa. Choosing what specific area of work her group would focus on was reportedly much harder.

It has taken years for the association, originally founded in 1929, to understand that offering all forms of support to people, in particular children, affected by TB and HIV, "was a matter that needed to be done".

Grant said that while TB is hard to diagnose in children, the presence of the disease is an unfortunate reality in a continent reeling from the TB and HIV epidemics. The sad thing for Grant however is that few people, including policy-makers and researchers, are interested in addressing real issues related to TB in children and she rues that it has taken the emergence of resistant strains of TB for the issue to receive public attention.

"Children need new therapies, particularly those aged under five who are exposed to TB by their parents or relatives," Grant said at the 38th Union World Conference on Lung Health in Cape Town this week. "And while few people understand TB issues in children, even fewer countries are trying to offer solutions."

Grant's assertions are illustrated by the situation in Tanzania. Dr Saidi Egwaga, Head of the national TB Programme in the country, acknowledges the presence of TB in children but says even he is not sure of the exact prevalence.

Instead Egwaga said that TB prevalence figures for the general population are used to plan for pediatric cases of the disease. "The main cause of TB transmission to children was adults with the disease," he added. The presence of TB in children is, therefore, primarily the result of a failure to cure infectious adults.

As well as risking re-emergence of TB in drug resistant forms, adults who do not complete their courses of TB treatment put children below the age of ten – often their own children or relatives – at risk of becoming infected. Dr Joseph Sitienei, Head of the TB and HIV Co-Infection Programme in Kenya estimates that TB cases in children aged below 14 years account for 11 percent of all registered cases.

"The immune system of children is less developed than that of an adult," explained Dr Sitienei. "The risk of developing active TB is therefore much higher in young children."

"The chance of developing TB disease is greatest shortly after infection. When children

present with active tuberculosis disease, their family members and other close contacts should be investigated for TB to find the source of the disease and treat them as necessary," he added.

TB control programmes that ensure early the diagnosis and treatment of adults with infectious forms of TB are the best way to prevent TB in children. Sitienei acknowledges that some trends of TB among children are emerging but said that given the decline in co-infection rates due to the scaling-up of prevention of mother-to-child HIV transmission (PMTCT), he expected to see a decline in pediatric TB cases and the development of other new measure to combat transmission.

These measures, he said, included implementing a government- and WHO-backed policy of having all children in a family with a TB patient put on isoniazid preventive therapy (IPT) – a drug that has been shown to reduce incidence of TB in children. But Sitienei also highlighted that diagnosing TB in children was more difficult than in adults and was typically based on a history of exposure to active TB cases, chest x-rays, physical examinations and a symptom score chart.

He said that Kenya has a overall TB treatment success rate of 87 percent and he estimated that the same to be true for children, whose adherence is dependent on the cooperation from their parents. Sitienei said that so far there have been no cases of drug-resistant TB found in children in the country.

Unfortunately this is not the case in South Africa. According to a paper produced by H. S. Schaff, of the Department of Pediatrics at Stellenbosch University, from March 2003 to December 2006, 5.4 percent of pediatric TB cases in the Western Cape were multi-drug resistant (MDR-TB).

Schaff warned that the appearance of MDR-TB in children had serious implications: It represented a failure of TB control programmes. He called for the aggressive treatment of pediatric MDR-TB in those countries already affected.

According to Dr Sitienei, the BCG vaccine, which is now decades old, remains the most effective means of preventing severe forms of TB, but it does not stop TB infections. The effectiveness of the vaccine has been called into question however by Dr Mark Cotton, a pediatrician and HIV researcher from Stellenbosch University.

Cotton pointed out recently that the BCG vaccine, given routinely at birth in many countries, uses a live bacteria that can cause TB disease among children with weakened immune systems, such as those living with HIV. Cotton estimated that 400 of every 100,000 HIV-infected infants in the Western Cape of South Africa became sick from the BCG vaccine.

Infants are not tested for HIV until they are at least six weeks old, but the vaccine is administered at birth, so newborn children with HIV positive are inadvertently given the live vaccine. On top of this, there is a delay in providing antiretroviral medication.

Cotton said it might be possible to simply vaccinate children with BCG after their HIV status is clear but he also said that such practical changes could interfere with programmes and complicate the issue further.

According to Cotton the best solution would be to diagnose and treat children with HIV earlier so that those who are HIV-positive can be given isoniazid instead of the vaccine to prevent TB infection.

It took almost 20 years for pediatric AIDS drug formulation to become a research, policy and funding priority, and former US President Clinton ultimately did a great deal to raise their importance and bring down their price. In a cruel parallel to that period of neglect, pediatric TB diagnosis and treatment options are now looking urgently for a prominent advocate.

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Key Correspondent Team
Health & Development Networks (HDN)

The KC Team is coordinated by Health & Development Networks (HDN).

Website: www.thecorrespondent.org Email: info@thecorrespondent.org