

NATIONAL STRONGYLOIDES WORKING GROUP

Strongyloidiasis is a national problem in Indigenous communities

Report from the 5th National Workshop on Strongyloidiasis, Alice Springs 17 Sept 2009

Doctors, Research scientists, microbiologists, Haematologists, Pharmacists, Health Educators, Environmental Health Officers and PhD students met in Alice Springs to hear presentations on the latest research in strongyloidiasis and discuss what can be done to help people who are suffering from the disease. People came from Brisbane, Townsville, Perth, Melbourne, Bendigo, Sydney, Central Australia and the NT Top End.

Strongyloidiasis is a disease caused by tiny tissue parasites called *Strongyloides stercoralis* and secondary infection by gut or respiratory system bacteria. The disease is life-long unless effectively treated. In the chronic form, the disease is characterized by intermittent gut, skin and respiratory symptoms, as well as abscesses in various parts of the body. In the severe form, it is characterized by pneumonia and/or septicaemia and/or meningitis and severe skin and gut symptoms depending where the infection is. It invariably ends in death unless the underlying strongyloidiasis is treated as well as the bacterial infection.

We don't know the exact distribution of strongyloidiasis in Australia because there is no register of who has been diagnosed with the disease, but people who live in Indigenous communities over the northern three-quarters of the Australian continent are affected. It occurs as far south as Kempsey in New South Wales and the goldfields of Western Australia, but we have as yet no information from Western New South Wales or the western part of Western Australia. Non-Indigenous staff who live in Aboriginal communities sometimes contract the disease. A number of grey nomads have contracted strongyloidiasis while on journeys to the north.

Strongyloidiasis also occurs in refugees from other regions of the world where it is endemic, and in travelers who have been to those places. There is a national programme to screen and treat refugees for strongyloidiasis, but as yet there is no programme to screen and treat Indigenous people where strongyloidiasis is endemic.

James McLeod's data from patients at Alice Springs Hospital showed that strongyloidiasis is present in people from virtually every community in Central Australia, including some over the border in South Australia and Western Australia. This indicates that *Strongyloides* is endemic throughout Central Australia. A large number of children between the age of 1 and 5 years were positive for *Strongyloides*.

Nick Anagnostou, Lloyd Einsiedel and Sheela Joseph, showed that Strongyloidiasis in Central Australia is Associated with Human T-Lymphotropic Virus Type 1 (HTLV-1) infection that suppresses the immune system. When these two diseases are in the same person, they progress much faster than in people with either one of the diseases.

Yasmin Sultana and Rogan Lee have done preliminary work that shows that samples of filter paper soaked in finger prick blood can be used to test for strongyloidiasis. This is very important because it means that the test can be used routinely to screen children for strongyloidiasis.

Yasmin's work in Bangladesh showed that 15% of slum people in Dhaka have strongyloidiasis. By comparison, in places in the Top End where people have been tested for strongyloidiasis, more than 30% are positive.

A programme to test and treat everyone in Galiwin'ku with Ivermectin to combat both strongyloidiasis and scabies at the one time has been planned in detail, but is yet to be funded.

We saw photographs of houses in Indigenous communities in the Northern Territory that showed that the plumbing was not properly installed or maintained. As a consequence waste water containing faeces pools inside houses. This is an ideal environment for the spread of strongyloidiasis and other diarrhoeal diseases. Houses in these communities are not required to meet the standards enforced in the main cities and towns of the NT.

The meeting concluded that the disease should be made notifiable and a national strongyloidiasis register established, to find out the extent of the problem, so that people who live in places where strongyloidiasis is endemic will be tested and treated for the disease.