

Poor attendance at a child TB contact clinic in Malawi

M. Nyirenda,* R. Sinfield,** S. Haves,* E. M. Molyneux,* S. M. Graham**

* Department of Paediatrics, College of Medicine, Blantyre, Malawi; † Liverpool School of Tropical Medicine, University of Liverpool, Liverpool, United Kingdom; ‡ Malawi-Liverpool-Wellcome Trust Clinical Research Programme, College of Medicine, Blantyre, Malawi

SUMMARY

SETTING: Child tuberculosis (TB) contact clinic, Queen Elizabeth Central Hospital, Blantyre, Malawi.

DESIGN: Patients registered with smear-positive pulmonary TB (PTB) were encouraged to bring childhood household contacts to the clinic for assessment and management. Data of TB cases registered over the same period were collected from the Blantyre District TB Office.

RESULTS: Attendance at the contact clinic was very

poor, representing only 7.7% of all adults registered with smear-positive PTB over 17 months, and was significantly lower for potential male source cases than females (OR 0.36, 95%CI 0.23–0.55, $P < 0.001$).

DISCUSSION: Improved uptake and implementation of child contact management in Malawi is a challenge.

KEY WORDS: tuberculosis; child; contact screening; Malawi

THE NATIONAL Tuberculosis Control Programme (NTP) guidelines of Malawi advise screening for all children <6 years and for those ≥ 6 years who are unwell who are 'household contacts of smear-positive tuberculosis (TB) cases'.¹ The objective of this audit was to determine what proportion of patients diagnosed with smear-positive pulmonary TB (PTB) in Blantyre District, Malawi, brought child household contacts for screening to the child TB clinic. The clinic is situated at Queen Elizabeth Central Hospital (QECH) and is the only child TB clinic in the Blantyre District, which has a population of nearly 1 million people.

Source cases were identified on the adult TB ward or at the point of registration with the Blantyre District TB Office (DTO), also situated at QECH. The sputum smear results of the source case were obtained from the NTP register. One of the authors (MN, RS or SH) visited the adult TB ward each week with the TB nurse to explain to all patients with smear-positive PTB the importance of assessing childhood household contacts. District TB officers who register patients for treatment were asked to inform patients with smear-positive PTB to bring any child living in the same house to the TB contact clinic for screening. A one-page illustrated leaflet in the local language was given to families either on the ward or when registering with the DTO to explain the importance of contact screening. Every 2 weeks, one of the authors visited the DTO to check what information was being

given to the smear-positive patients and to supply more information leaflets.

We aimed to keep practice in line with the NTP recommendations as much as possible to simulate what is achievable within the confines of a government teaching hospital and a resource-poor community. Almost all eligible children were out-patients and needed to be brought to the hospital clinic by the source case or a guardian on three occasions: for initial assessment at clinic, administration of tuberculin skin test (TST), reading of TST and decision about management. No inducements (e.g., compensation for transport costs) were offered. Mantoux solution is not supplied by the Ministry of Health in Malawi but is currently available at QECH and imported from the United Kingdom due to support provided by TB Alert! UK. Chest X-rays (CXRs) are not performed in asymptomatic children due to a lack of films, a shortage of radiographers and long waiting times that would usually mean an additional appointment.

We did not seek ethical approval for this study, as it represents a retrospective audit of routine practice.

ASPECT OF INTEREST

From 1 December 2003 until the end of April 2005, 1438 adults with smear-positive PTB were registered at Blantyre DTO. Over the same period, 146 children who were household contacts of 111 patients treated for smear-positive PTB presented for assessment at

Correspondence to: Dr Stephen M Graham, Wellcome Trust Research Labs, P O Box 30096, Blantyre 3, Malawi. Tel: (+265) 676444. Fax: (+265) 675774. e-mail: sgraham@mlw.medcol.mw

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the child TB clinic. Of the source cases, 76 were female and 35 were male, compared to 655 females and 783 males registered and treated for smear-positive PTB in Blantyre District over the same period. Uptake for the contact clinic was therefore very low (7.7%), and significantly lower for potential male source cases than for females—4.5% vs. 12%, respectively (odds ratio 0.36, 95% confidence interval 0.23–0.55, $P < 0.001$). Prevalence of TB infection and disease among child contacts of adults with smear-positive PTB was high (51% and 23%, respectively), and assessment and management of the children will be reported in detail in a separate article (article submitted).

DISCUSSION

We found that our hospital-based contact screening service is poorly utilised despite attempts to raise awareness of the importance of contact screening. Our findings are consistent with an earlier cross-sectional survey in Malawian hospitals.² There are study limitations: we compared the number of adults with smear-positive PTB who attended the contact clinic with children with the total number of adults diagnosed with smear-positive PTB over the same period. It would have been more accurate to compare the number of child contacts who attended with the total number of child contacts in the community who were eligible for screening. However, this information was not available. Furthermore, we were unable to establish a mechanism to double check what information was given to patients registered through the DTO but not on the wards.

We found a predominance of female source cases presenting to the clinic, even though more males were registered with smear-positive PTB over the study period. Females may be more likely to attend if their children are not well; furthermore, breast-feeding babies may already be with their mothers in hospital, facilitating clinic attendance.

The burden of childhood TB has increased substantially in Malawi over the last two decades.³ Contact screening and isoniazid preventive therapy (IPT) has great potential for reducing this burden by preventing progression to disease in young children infected with TB.⁴ Further, contact tracing will identify children who require TB treatment.

In practice, screening of child contacts rarely happens, despite its being recommended by the Malawi NTP.¹ Many health workers in Malawi are not aware of the rationale for contact screening. There are many resource constraints within the NTP, resulting in priority being given to effective management of the most infectious cases. There is no registration or monitoring of children receiving IPT. CXR and TST are not readily available and require repeated visits to a central hospital. This is costly and impractical for many families, and it is particularly difficult to convince them of the benefit when the child is well. In the

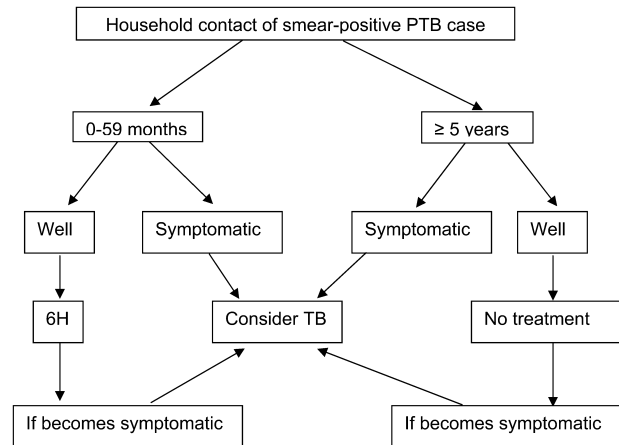


Figure Suggested contact management algorithm using clinical features alone. PTB = pulmonary tuberculosis; 6H = 6 months of isoniazid preventive treatment.

Thyolo study, only 17% of children eligible for IPT actually received it, the major obstacle being the need for CXR.⁵

There is a need to increase the uptake and improve the practice of child contact screening in Malawi. It is feasible to perform effective screening using clinical examination alone (Figure).⁶ This might allow the service to be decentralised to the health centre where the source case attends for treatment, but would require education, support and supervision of health workers who manage TB patients at all levels. Our audit suggests that an additional challenge will be to convince patients with PTB of the potential benefit of child contact screening.

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R É S U M É

CONTEXTE : Polyclinique pour enfants-contact de cas de tuberculose (TB), Queen Elizabeth Central Hospital à Blantyre, Malawi.

SCHÉMA : Les patients enregistrés comme TB pulmonaire (TBP) à bacilloscopie positive ont été invités à amener les enfants-contact du ménage à la polyclinique pour évaluation et prise en charge. Les données des cas TB enregistrés pour la même période ont été colligées au Bureau TB du District de Blantyre.

RÉSULTATS : La participation à la polyclinique de con-

tact a été très faible et n'a représenté que 7,7% de tous les adultes enregistrés comme atteints de TBP à bacilloscopie positive sur une période de 17 mois ; elle a été significativement plus faible quand les sources potentielles étaient des hommes plutôt que des femmes (OR 0,26 ; IC95% 0,23–0,55 ; $P < 0,001$).

DISCUSSION : Le défi au Malawi consiste à améliorer le recrutement et la mise en œuvre de la prise en charge des enfants-contact.

R E S U M E N

MARCO DE REFERENCIA : Un consultorio pediátrico de contactos de tuberculosis (TB) del Queen Elizabeth Central Hospital, en Blantyre, Malawi.

MÉTODO : Se solicitó a los pacientes registrados con TB pulmonar (TBP) y baciloscopia positiva del esputo, que acudieran con sus contactos domiciliarios pediátricos a la consulta para evaluación y tratamiento. Se recogieron los datos de los casos de TB registrados durante el mismo periodo en el consultorio de TB del distrito de Blantyre.

RESULTADOS : La asistencia al consultorio de contactos fue muy baja, pues alcanzó sólo un 7,7% del total de adultos registrados con TBP bacilífera durante los 17 meses, y fue significativamente más baja cuando el posible caso inicial fue un hombre (OR 0,36 ; IC95% 0,23–0,55 ; $P < 0,001$).

DISCUSIÓN : El aumento de la captación y la aplicación del manejo de los contactos pediátricos de pacientes con TB constituyen un desafío en Malawi.
