

## Immigrants and tuberculosis

The article by Neil Heywood and associates<sup>1</sup> presents an algorithm for tracking potential cases of tuberculosis (TB) in recent arrivals to Canada, but it should not give Canadians a sense of security.

In my experience of practising in northwest metropolitan Toronto for over 20 years, I have seen many immigrants and refugees with TB that was probably active at the time of their arrival in Canada. However, the medical examination before arrival and the screening after arrival were inadequate to identify the disease.

The implication that skin testing would yield too many false-positive results is indefensible. If the test result is positive and the patient is deemed a "low-risk reactor," at least the information will be in the patient's dossier. Should the person become ill, this information should alert medical personnel of possible reactivation of TB. We must also be aware of the possibility of anergy. In Ontario, all health care workers are required to undergo skin testing for TB.

Heywood and associates<sup>1</sup> also discuss surveillance for pulmonary TB; however, no provision is made for identifying extrapulmonary disease, of which I

have seen many cases. For example, patients have been referred to me with a tentative diagnosis of inflammatory bowel disease or a "funny skin swelling." The former had gastrointestinal TB, the latter classic "cold abscesses." Like syphilis, TB is a great mimic of other diseases and conditions.

Immigrants and refugees from areas where TB is endemic should be thoroughly screened, and a skin test is essential for people from regions such as the Indian subcontinent and Somalia.

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### Reference

1. Heywood N, Kawa B, Long R, Njoo H, Panaro L, Wobeser W, on behalf of the Immigration Subcommittee of the Canadian Tuberculosis Committee. Guidelines for the investigation and follow-up of individuals under medical surveillance for tuberculosis after arriving in Canada: a summary. *CMAJ* 2003;168(12):1563-5.

The article by Neil Heywood and associates<sup>1</sup> draws attention to an important aspect of the health management of adult immigrants and refugees. However, the authors do not make clear that infants and young children (those under 5 years of age) who have

been exposed to TB should be managed differently, as they are at much higher risk of progression to active disease. In contrast to adults with recent latent TB infection, among whom the risk for progression to active disease within 5 years is less than 2%, the likelihood of such progression in an infant is up to 40%.<sup>2</sup> Furthermore, infants and young children are much more likely than older children and adults to experience life-threatening forms of TB such as TB meningitis and miliary TB.<sup>2</sup> TB meningitis occurs in approximately 0.5% of children with untreated primary infection;<sup>3</sup> if left untreated this condition is often fatal. In contrast, TB meningitis in adults is much rarer after untreated primary infection.

I am curious as to why young children were omitted from the discussion (in the first full paragraph on page 1564) of giving greater priority for identification and management to those at greater risk of progression to active disease; young age is not even mentioned as a major risk factor for progression.

Readers might be left with the erroneous impression that these guidelines are appropriate for immigrants and refugees of all ages, whereas they really apply only to adults. Nonetheless, physicians also need information about

the management of TB in young immigrants and refugees.

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### References

1. Heywood N, Kawa B, Long R, Njoo H, Panaro L, Wobeser W, on behalf of the Immigration Subcommittee of the Canadian Tuberculosis Committee. Guidelines for the investigation and follow-up of individuals under medical surveillance for tuberculosis after arriving in Canada: a summary. *CMAJ* 2003;168(12):1563-5.
2. American Thoracic Society and Centers for Disease Control and Prevention. Targeted tuberculin testing and treatment for latent tuberculosis infection. *MMWR Morbid Mortal Wkly Rep* 2000;49(RR-6):1-51.
3. Jaffe IP. Tuberculosis meningitis in childhood [letter]. *Lancet* 1982;1:738.

### [One of the authors responds:]

The purpose of the immigration medical examination (IME) is to “identify those who may pose a risk to public health or safety, or may place excessive demands on Canadian health and social services.”<sup>1</sup> With respect to TB this primarily involves the detection of people with active infectious (i.e., respiratory) TB and not those with extrapulmonary TB or latent TB infection. Applicants identified as having active TB abroad are denied entry to Canada until they have completed a satisfactory course of treatment and have been reassessed. Those with abnormal chest radiography findings that are consistent with latent TB infection or a history of TB are referred for medical surveillance once they arrive in Canada.<sup>2</sup>

Despite efforts to identify all cases of active respiratory TB in migrants to Canada through the IME process, some cases of the disease do unfortunately occur in recent migrants. Possible reasons include progression to active disease after a person has undergone the IME but before immigration to Canada or presence of active TB when a person applies for refugee status from within Canada. Although the focus of our article<sup>2</sup> was the medical surveillance of recent immigrants, not the IME, Wallace

Watson raises a legitimate and frequently asked question regarding the role of tuberculin skin testing as part of the IME. The Immigration Subcommittee of the Canadian Tuberculosis Committee has issued an evidence-based advisory committee statement addressing questions about tuberculin skin testing of new migrants to Canada (see page 1035).<sup>3</sup>

Children are also screened for symptoms of active TB disease during the IME, but, as for adults, they are not screened for latent TB infection. As highlighted by Noni MacDonald, a child up to 5 years of age who is infected with *Mycobacterium tuberculosis* has a 2.2 to 5 times greater risk of progression to active TB disease<sup>4</sup> than an adult without risk factors for disease progression. Our article<sup>2</sup> was a summary of the full guidelines for the investigation and follow-up of individuals placed under immigration medical surveillance. The more comprehensive guideline does discuss young children, recommending that “[y]oung persons (particularly those ≤ 5 years of age) infected with TB who have been identified through investigations of their parent(s) or guardian(s) may be at increased risk of progression to active disease and are likely to tolerate therapy without complications.”<sup>5</sup> MacDonald’s point about the need for physicians to have information specific to the management of TB in young immigrants and refugees is well taken, and the issue of incorporating specific pediatric recommendations into future Canadian Tuberculosis Committee advisory statements will be raised at the next meeting of the committee.

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### On behalf of the Immigration Subcommittee of the Canadian Tuberculosis Committee

### References

1. Immigration and Refugee Protection Act, S.C. 2001, c. 27.
2. Heywood N, Kawa B, Long R, Njoo H, Panaro L, Wobeser W, on behalf of the Immigration Subcommittee of the Canadian Tuberculosis Committee. Guidelines for the investigation and

follow-up of individuals under medical surveillance for tuberculosis after arriving in Canada: a summary. *CMAJ* 2003;168(12):1563-5.

3. Menzies D. Screening immigrants to Canada for tuberculosis: Chest radiography or tuberculin skin testing? *CMAJ* 2003;169(10):1035-6.
4. Long R, editor. *Canadian tuberculosis standards. 5th ed.* Ottawa: Canadian Lung Association and Health Canada; 2000.
5. Immigration Subcommittee of the Canadian Tuberculosis Committee. Canadian guidelines for the investigation and follow-up of individuals under medical surveillance for tuberculosis after arrival in Canada. *Can Commun Dis Rep* 2001;27(19):157-65.

## Nephrology care in Canada

Caroline Stigant and associates<sup>1</sup> raise several controversial issues in their article on caring for adults with chronic kidney disease. How these issues are resolved could have major implications for the delivery and cost of nephrology care in Canada.

First, the authors do not clearly address the question of who should be tested for kidney disease. People with hypertension, diabetes, cardiovascular disease and autoimmune disease (the risk factors listed in Box 4 of the article) are at high risk and should be screened by urinalysis and by testing for serum creatinine. Conversely, the utility of unselected population screening for renal disease (e.g., by dipstick) is very low,<sup>2,3</sup> and should not be recommended.

The authors suggest that estimating equations be used to identify patients with low glomerular filtration rate (GFR) (e.g., their Table 2). Arguments both for<sup>4</sup> and against<sup>5</sup> this strategy have been published. Stigant and associates<sup>1</sup> argue the pro position, but the con argument is also compelling. Applying estimating equations universally will lead to the “labelling” and referral of many patients who would not otherwise have been identified as having renal failure. These patients will have different demographic characteristics (older age, more women, higher proportion with nonproteinuric renal disease) and probably a lower risk of progression than those identified on the basis of serum creatinine level.<sup>4,5</sup> The benefits of nephrological intervention in such patients is unclear. Moreover, current nephrology resources could not possibly