A Stitch in Time Saves Nine: Measures to Prevent the Spread of Tuberculosis in the Israeli Prison System

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The Israeli Public Health Service, headed by one of the authors of the article on tuberculosis in Israeli prisons in this issue of IMAJ, was confronted in the 1990s with a rise in the incidence of TB due to immigration from TB-endemic countries, namely the former Soviet Union and Ethiopia. When a study by another of the authors demonstrated a serious problem in the completion of treatment of TB, the “case for action” was complete [1]. The Public Health Service, acting on a circular issued by the Director General of the Ministry of Health, instituted vigorous and effective measures to identify and treat TB in the country at large [2]. Thus, acting on epidemiological data similar to those revealed in the paper in this issue by Mor and colleagues [3], what has become a model National TB program was set in place [4,5].

Mor et al. [3] show that the incidence of TB in the Israeli prison system is 3.5 times higher than in the general population—without a systematic attempt to contain it. This finding runs counter to the policy and achievements of the Public Health Service and the Department of TB and AIDS in the battle to prevent the spread of tuberculosis in Israel. It transpired in the investigation by Mor and collaborators that the Israeli Prison Service did not adopt the recommendations made to it by the Public Health Service. In light of these findings, the paper’s title—“Tuberculosis behind bars in Israel: policy making within a dynamic situation”—would have been more appropriate had the second phrase been “playing with fire.”

The issues at stake are not only outbreaks in the prison system that affect inmates [6] and prison staff [7], but also that spread to the community [8].

The authorities responsible for the Prison Service and particularly for health in the Prison Service would do well to heed the “case for action” provided by this study and embark on a new course. Implementing the measures needed may not be easy, as was the case in setting up a new national TB program [9], but the stakes are high enough to warrant a sustained effort by those involved until the recommended means are in place.

Tuberculosis in the prison setting is a well-known phenomenon. In parts of the former Soviet Union, multiple drug-resistant tuberculosis is on the rampage and in many western countries it warrants special attention [10,11].

The Public Health Service has no jurisdiction regarding health policy in the prison system. Thus, it cannot intervene in the face of the neglect of this important issue although it is aware, as the paper specifically states, that “TB screening policy is practiced inconsistently in few of the Israeli prisons, upon physician discretion.” This omission continues despite the fact that “every new inmate is given a medical examination upon incarceration and is screened for HIV infection.”

Multiple drug-resistant and extensively resistant TB entities with less than a 50% chance of cure under most circumstances, were, and continue to be, definite possibilities in a prison population given to drug abuse (as documented by the authors), a major risk factor for these entities. A similar situation in the New York Prison Service led to the deaths of both inmates and prison staff [12]. This serious possibility has not led the prison authorities to take the necessary simple measures required to control TB in a high risk population such as the prison inmates for whom they have total responsibility. Thus, they are exposing both inmates and staff, and the community outside the prison to which prisoners return upon discharge, to unacceptable yet preventable risks.

As pointed out earlier, when the threat of rising TB incidence became apparent, the Israel Public Health Service preempted the spread of TB before the situation became out of control, a move that was not initiated in time in the United States for instance [13], later requiring a tremendous outlay in manpower and facilities [14]. In contrast, it seems that it might take the unfortunate, but in this author’s opinion, inevitable, death of a prison official or an inmate due to multiple drug-resistant or extensively resistant TB, to galvanize those responsible into action.

The appropriate measures recommended in the paper, which are necessary and indeed are standard in many countries, consist simply of screening all individuals for active TB upon entry to the prison system. This is done by means of a short verbal questionnaire. In conjunction, there is a need to identify recent infection in the prison staff at risk. This is possible by a one-time
extensive application of the tuberculin skin test to all staff in contact with inmates, with appropriate follow-up, as is done for instance for health care workers in general but also by the Israel Defense Forces and the Jewish Agency in select populations as mentioned below.

The administrative and medical authorities of the Prison Service are aware of the steps needed to be taken but have not implemented them on a comprehensive scale. This finding is even more incomprehensible in light of the fact that medical screening of new inmates is done, and human immunodeficiency virus, which is infinitely more expensive to screen for (a laboratory test versus six questions to be asked at the medical interview), is addressed by the Prison Service. It becomes apparent that a consideration when appointing the director of the Medical Department of the Prison Services should be a sound background in public health.

Many organizations alerted by the Public Health Service to the need for screening for TB in congregate settings, in distinction to the Prison Service, adopted the recommendations for TB control in their constituencies. The Jewish Agency, which runs boarding schools populated by a disproportionate number of immigrants from high prevalence TB areas, screens all new applicants at the recommendation of the Public Health Service. The Israel Defense Force does the same for conscripts who teach high TB risk immigrant populations as part of their military service.

Tuberculosis is a major public health threat if left to its own devices. This, unfortunately, is the current situation in the Israel Prison Services and requires immediate rectification.

References
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Capsule

Therapeutic differentiation of lymphatic vessels

Surgery or radiation therapy of metastatic cancer often damages lymph nodes, leading to secondary lymphedema. Tammela et al. show, using a newly established mouse model, that collecting lymphatic vessels can be regenerated and fused to lymph node transplants after lymph node removal. Treatment of lymph node-excised mice with adenovirally delivered vascular endothelial growth factor-C (VEGF-C) or VEGF-D induced robust growth of the lymphatic capillaries, which gradually underwent intrinsic remodeling, differentiation and maturation into functional collecting lymphatic vessels, including the formation of uniform endothelial cell-cell junctions and intraluminal valves. The vessels also reacquired pericyte contacts, which down-regulated lymphatic capillary markers during vessel maturation. Growth factor therapy improved the outcome of lymph node transplantation, including functional reconstitution of the immunological barrier against tumor metastasis. These results show that growth factor-induced maturation of lymphatic vessels is possible in adult mice and provide a basis for future therapy of lymphedema.

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