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Editorial

EDITORIAL
Extrapulmonary tubercolisis within prisons: the need to face an ever changing reality

It has been long proven that extrapulmonary tuberculosis (EPTB) accounts for a variable proportion of all cases of the disease, mainly affecting in our country immunocompromised patients and immigrants from developing countries. Early detection is already a challenge since it can usually present with scarce symptoms or be mistaken with other processes hence the important diagnostic delay reported [1].

Longitudinal studies carried out in developed countries have proven that the proportion of EPTB cases has remained stable mainly due to an impaired reduction of incidence rates compared to pulmonary TB. This may be related to the increased number of immigrant residents in these countries[2].

Therefore, countries in the European Union reported stable EPTB rates of about 3.3 cases per 100,000 people from 2001, with an incidence of 22.3% for exclusively extrapulmonary forms of the disease. This proportion varies throughout countries surpassing 35% in Great Britain and the Netherlands. In Spain, it has remained the same around 30% [3-4]. In Barcelona in 2012, 43% of immigrant patients suffering from TB presented an exclusively extrapulmonary form of the disease, mainly affecting the lymph nodes. This occurred in up to 50% of those immigrants coming from the Indian subcontinent[5].

Risk factors associated with EPTB include the following: younger age, women, non-European ethnicity, immunosuppression caused by HIV, end-stage renal disease, hepatic cirrhosis and probably solid organ transplantation and anti-TNF2 therapies.

Penitentiary authorities have played a remarkable role in the diagnosis and treatment of TB, especially throughout the last thirty years. The relevance of Penitentiary Institutions (PI) began increasing in the 80s with a massive admission of intravenous drug users (IDUs) to prison, most of whom had been coinfected by HIV and *M.tuberculosis.* EPTB in patients infected by HIV was a very common association which outlined the importance of AIDS in Spanish prisons, especially when in 1987 EPTB was established as a diagnostic criterion for AIDS in HIV infected patients[6].

There have been two key contributions to the improved control of TB both in prisons and outside them: 1) the implementation of methadone maintenance programs (MMPs) which enabled an easier access to IDUs- who were already considered to be at risk for TB in the pre-AIDS era [7-8] and 2) the incorporation of directly observed therapy (DTO) strategies in everyday's clinical practice for the management of TB patients[9]. Systematic screening at entry which has been conducted for years now has played and still plays a relevant role in allowing certain diagnoses and avoiding the transmission of the disease- a routine which is still being discussed in other countries[10-11.]

The management of TB in HIV patients improved extraordinarily with the introduction of highly active antiretroviral therapies (HAART) in 1996, leading to a reduction of TB cases in this group. Nevertheless, Spain has undergone profound demographical changes ever since 2000 with the arrival of over 5 million immigrants many of whom come from areas endemic for TB, hence the increased diagnosis of this disease. This has also had an impact on prisons, where the prevalence of latent tuberculosis infection (LTBI) has been estimated in 40-45% but remains as low as 28.9% among Spanish inmates and inmates from developed countries while it reaches 63% among inmates from the former Eastern bloc and even 75% in inmates from sub Saharan Africa[12].

Apart from an increased number of TB cases, immigration has also entailed a variation of clinical presentations, sometimes hampering or delaying the diagnosis of the disease. Moreover, common diagnostic tests (sputum smear microscopy, culture, PCR) have a lower performance, since these forms entail a lower bacillary load. In Barcelona-where over 50% of cases belong to immigrants- expansion of EPTB has been observed. EPTB frequently lacks intense symptoms and may be mistaken with other processes, therefore delaying adequate diagnosis. The median delayed diagnosis in this city was 48 days, while it is 38.5 for pulmonary forms.

Treatment mostly remains the same as for pulmonary forms and its duration will mainly depend on the severity and the therapeutic response.

This response is occasionally torpid as it has been observed that over 25% of lymphatic forms have required treatment for 9 months or longer (Tuberculosis Program of Barcelona, results yet to be published).

These changes have also been observed in prisons, where they have extensive experience on EPTB as it has been stated in the reports published in this same issue of the Spanish Journal of Prison Health. Both the case of metastatic tuberculous abscess[13] and the clinical description of long term back pain[14] reflect the changes on the clinical presentation and the difficulties that diagnosis sometimes entails.

It is of paramount importance that penitentiary authorities continue their interventions on the control of TB although their diagnostic and treatment programs should probably adjust to the new and ever changing sociological and healthcare reality. Among these measures we must outline the importance of promoting healthy lifestyles both among immigrants and native inmates, physical examination upon imprisonment, contact investigation in TB cases, the identification of those susceptible of LTBI treatment and the continuation of DOTs. We must not forget that in Europe most of the cases of anti-TB drug resistance are found among immigrants and therefore it should also be assessed in all the diagnosed cases.

To conclude, EPTB in prisons entail a series of changes in the medical practice. The role of medical services in the detection of cases is of paramount importance. This entity needs to be suspected in the revision of inmates at entry and in subsequent revisions in long-term prisoners. Clinical manifestations as well as infection sites vary enormously and sometimes translate recent infection-hence the importance of a thorough contact investigation both inside and outside prison, with the cooperation of the corresponding programs as to identify authentic index cases and secondary cases in the context of laryngeal TB, which is highly communicable.

CORRESPONDENCE

À Orcau, J A Caylà
aorcau@aspb.cat
Programa Tuberculosis y Unidad de Investigación en Tuberculosis de Barcelona.
CIBER de Epidemiología y Salud Pública (CIBERESP).
Servicio de Epidemiología.
Agència de Salut Pública de Barcelona.

BIBLIOGRAPHICAL REFERENCES

1. Hesselink DA, Yoo SM, Verhoeven GT, Brouwers JW, Smit FJ, van Saase JL. A high prevalence of culture-positive extrapulmonary tuberculosis in a large Dutch teaching hospital. Neth J Med. 2003; 61(3): 65-70.
2. A. Orcau, JA Caylà, JA Martínez. Present epidemiology of tuberculosis. Prevention and control programs. Enferm Infecc Microbiol Clin. 2011; 29 (Supl 1): 2-7
3. European Centre for Disease Prevention and Control (ECDC)/World Health Organization Regional Office for Europe. Tuberculosis surveillance and monitoring in Europe 2013. Stockholm: ECDC; 2013 [cited 2014 May 28]. Available from: http://www.ecdc.europa.eu/en/publications/Publications/Tuberculosis-surveillance-monitoring-2013.pdf
4. Centro Nacional de Epidemiología. Instituto de Salud Carlos III. Informe epidemiológico sobre la situación de la tuberculosis en España. Año 2012. Madrid: Instituto de Salud Carlos III; 2013 [citado 2014 May 29]. Disponible en: http://www.isciii.es/ISCIII/es/contenidos/fd-servicios-cientifico-tecnicos/fd-vigilancias-alertas/fd-enfermedades/TB_Informe_2012_CNE_8abril2014.pdf
5. La tuberculosi a Barcelona, 2012. Programa de tuberculosi de Barcelona. Barcelona: Agència de Salut Pública de Barcelona; 2013 [citado 2014 May 29]. Disponible en: http://www.aspb.cat/quefem/docs/Tuberculosi_2012.pdf
6. Centers for Disease Control (CDC). Revision of the CDC surveillance case definition for acquired immunodeficiency syndrome. Council of State and Territorial Epidemiologists; AIDS Program, Center for Infectious Diseases. MMWR Morb Mortal Wkly Rep. 1987 Aug 14; 36 Suppl 1: 1S-15S.
7. Reichman LB, Felton CP, Edsall JR. Drug dependence, a possible new risk factor for tuberculosis disease. Arch Intern Med. 1979; 139: 337-9.
8. Marco A, Caylà JA, Serra M, Pedro R, Sanrama C, Guerrero R, et al. Predictors of adherence to tuberculosis treatment in a supervised therapy program for prisoners before and after release. Eur Resp J. 1998; 12: 967-71.
9. Rodrigo T, Caylà JA, García de Olalla P, Brugal MT, Jansà JM, Guerrero R, et al. Effectiveness of tuberculosis control programmes in prisons, Barcelona 1987-2000. Int J Tuberc Lung Dis. 2002; 6: 1091-7.
10. Sanchez A, Massari V, Gerhard G, Espinola AB, Siriwardana M, Camacho La, et al. X ray screening at ebtry and systematic screening for the control

of tuberculosis in a highly endemic prison. BMC Public Health. 2013; 13: 983. Doi: 10.1186/1471-2458-13-983.

11. Henostroza G, Topp SM, Hatwiinda S, Magardd KR, Phiri W, Harris JB, et al. The high burden of tuberculosis and human immunodeficiency virus in a large Zambian prison: a public health alert. Plos One. 2013; 8: e67338. Doi: 10.1371.
12. Marco A, Solé N, Orcau A, Escribano M, del Baño L, Quintero S, et al. Prevalence of latent tuberculosis infection in inmates recently admitted to a men's prison in Barcelona. Int J Tuberc Lung Dis. 2012; 16: 60-4.
13. Marco A, Solé R, Raguer E, Aranda M. Goma o absceso tuberculoso metastásico como diagnóstico inicial de tuberculosis en un paciente inmunocompetente: una presentación inusual. Rev Esp Sanid Penit. 2014; 16: 39-42.
14. Español J, Raguer E, Albertos R, Guerrero RA. Dorsalgia crónica que resulto ser Espondilodiscitis tuberculosa. Rev. Esp Sanid Penit. 2014; 16: 43-45.
15. Haas D, Des Prez RM. Mycobacterium Tuberculosis. En: Mandell G, Bennett J, Dolin R, editors. Mandell, Duglas and Bennett's Principies and Practice of Infectious Diseases. New York: Churchill Livingstone; 1995, p. 2213-43.