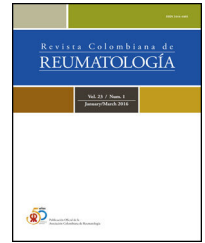




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Editorial

Tuberculosis risk in immunosuppressed patients: Revisiting an old acquaintance

Riesgo de tuberculosis en pacientes con inmunosupresión: en búsqueda de una vieja conocida



Colombia has an annual incidence of tuberculosis that is between 21.3 and 35.2 cases per 100,000 inhabitants in recent years,¹ which places it as a country with intermediate risk for this disease, similar to what happens in other countries in the region, although lower than what is found in Peru, but much higher (4 or more times) than what is observed in countries with higher incomes such as the United States or European countries.² These values imply a low risk of developing tuberculosis in the general population throughout life, but with the development and the decrease in poverty, tuberculosis has become concentrated in older individuals and risk groups. Among these risk groups are patients who are immunocompromised due to their underlying disease or to the therapy required to control it. Due to the impact that tuberculosis has among these immunocompromised patients, it is vital to identify this risk and manage it appropriately, which has been of interest to the Colombian Association of Rheumatology and its collaborators.³

In this scenario, the work of Javier Cajas et al.⁴ makes a significant contribution to understanding and managing this risk in patients who usually consult the service for immunomodulatory management of their pathology. With 674 patients of the rheumatology clinic, 495 with immunosuppression and 178 without it, 22.9% and 17.4% patients with latent tuberculosis were identified, respectively. The identification was made using the tuberculin test, which is easily accessible and inexpensive in most settings where these services are offered. Although there is still considerable debate about whether or not the tuberculin test is better than tests based on the expression of interferon, systematic reviews do not appear to show important differences in sensitivity, with high specificity.⁵

However, the data suggest that there could be more problems of interpretation in children, due to the use of vaccination against tuberculosis with BCG,⁶ but the tuberculin test requires a second step, the booster, in order to be able to capture the patients who need a second immune stimulus. In the group in which the booster was applied (191 patients), an additional 4.1% of patients with latent tuberculosis were identified. The patients correspond to those seen in this type of consultation, with high frequencies of rheumatoid arthritis (77% of the immunosuppressed) and use of steroids at a prednisolone dose of 5 mg or more per day (69% of the immunosuppressed). In this group, 94 patients (22%) received biological therapy as part of their immunosuppressive scheme.

This data on the prevalence of latent tuberculosis is slightly lower than that observed a few years ago in a group of hospitalized patients with diabetes, in whom a prevalence of 35% of latent tuberculosis was found,⁷ and is closer to what is expected for foreigners who enter the United States.⁸ We also know that about 10% of patients who become infected with tuberculosis are at risk of developing the disease²; half of them will do so in the first 2 years and the rest throughout the rest of their lives. Given that the studies show that the use of steroids is associated with a 2.8-fold increased relative risk and that the use of tumor necrosis factor inhibitor is associated with a 2-fold increased risk,⁸ the data from Cajas et al. suggest that the risk of tuberculosis in these patients may be around 5–7% over their lifetime.

The identification of latent tuberculosis is useful for timely treatment, a task in which infectology groups frequently support rheumatologists. The use of different medications (isoniazid alone or in different combinations) has decreased

the risk of active infection by more than 50%.⁹ On the other hand, the use of these drugs may be associated with some degree, usually low, of toxicity, which in the case of isoniazid is usually hepatic or neurological.

There are tools to individualize the decision, one of them is the interpreter of the tuberculin test or the interferon tests, available online (www.tstin3d.com/en/calc.html), which is based on an algorithm that takes into account many other variables that can modify the risk, including the patient's geographic data of origin.¹⁰ In this way, a more objective risk assessment can be offered to the patient, and thus the most appropriate therapeutic options for the treatment of latent tuberculosis can be taken. Together with the opinion of the rheumatologist on the urgency and therapeutic options of immunosuppressive or immunomodulatory treatment of a patient, better results can be achieved with the certainty of significantly reducing the risk that tuberculosis entails.

Tuberculosis is an old acquaintance of doctors and its incidence can decrease if living conditions improve in Colombia, but it is still an important risk for a group of patients in the rheumatology clinic who receive immunosuppressive medications, and the study presented in this issue helps us to know that it is present in approximately a quarter of them.

REFERENCES

1. Bermúdez Pinzón LA, Bocanegra Horta DP. Comportamiento de la tuberculosis, Colombia, a semana 10 de 2024. *Boletín Epidemiológico Semana*. 2024;19:1-6, <http://dx.doi.org/10.33610/23576189.2024.11>.
2. Zumla A, Raviglione M, Hafner R, von Reyn CF. Tuberculosis. *N Engl J Med*. 2013;368:745-55, <http://dx.doi.org/10.1056/NEJMra1200894>.
3. Quintero E, Chalem M, Vásquez G, Jauregui E, Medina JF, Arbeláez AM, et al. Gestión de riesgo para la prescripción de terapias biológicas. *Rev Colomb Reumatol*. 2016;23:18, <http://dx.doi.org/10.1016/j.rcreu.2016.02.004>.
4. Cajas J, Rodríguez M, Ceeballos MF. Detection of latent tuberculosis by tuberculin booster in patients with immunosuppressive treatment. *Rev Colomb Reumatol*. 2024, <http://dx.doi.org/10.1016/j.rcreu.2023.10.006>.
5. Auguste P, Madan J, Tsertsvadze A, Court R, McCarthy N, Sutcliffe P, et al. Identifying latent tuberculosis in high-risk populations: systematic review and meta-analysis of test accuracy. *Int J Tuberc Lung Dis*. 2019;23:1178-90, <http://dx.doi.org/10.5588/ijtld.18.0743>.
6. Subramani R, Datta M, Swaminathan S. Does effect of BCG vaccine decrease with time since vaccination and increase tuberculin skin test reaction? *Indian J Tuberc*. 2015;62:226-9, <http://dx.doi.org/10.1016/j.ijtb.2015.08.002>.
7. Méndez J, Sánchez E, Saavedra A, García Herreros P. Prevalencia de tuberculosis latente en pacientes con diabetes mellitus en una institución hospitalaria en la ciudad de Bogotá, Colombia. *Acta Med Colomb*. 2017;42:7.
8. Horsburgh CR Jr, Rubin EJ. Clinical practice. Latent tuberculosis infection in the United States. *N Engl J Med*. 2011;364:1441-8, <http://dx.doi.org/10.1056/NEJMcp1005750>.
9. Sterling TR, Njie G, Zenner D, Cohn DL, Reves R, Ahmed A, et al. Guidelines for the treatment of latent tuberculosis infection: Recommendations from the National Tuberculosis Controllers Association and CDC, 2020. *MMWR Recomm Rep*. 2020;69:1-11, <http://dx.doi.org/10.15585/mmwr.rr6901a1>.
10. Menzies D, Gardiner G, Farhat M, Greenaway C, Pai M. Thinking in three dimensions: a web-based algorithm to aid the interpretation of tuberculin skin test results. *Int J Tuberc Lung Dis*. 2008;12:498-505.

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