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Diabetes mellitus and latent tuberculosis infection: to screen or not to screen?

Joana Barreira(1), R Carvalho(2), AF Lima(3), V Guedes(4)

(1) ACES Maia-Valongo, USF Viver Mais, Maia, Portugal

(2) ACES Maia-Valongo, USF Ermesinde, Valongo, Portugal

(3) ACES Maia-Valongo, USF Alto da Maia, Maia, Portugal

(4) ACES Porto Oriental, USF Faria Guimarães, Porto, Portugal

Corresponding author: Dr Joana Barreira, USF Viver Mais, ACES Maia/Valongo, Maia, Portugal. E-mail: joana.f.barreira@gmail.com

Background and Aim: Diabetes mellitus (DM) increases the risk of active tuberculosis (TB), complicates treatment, increases rates of death and recurrent TB. Given the public health implications of this causal link, there is a clear need for a systematic assessment in order to inform the decision-making process about latent tuberculosis infection (LTBI) screening in diabetic people.

Method: Search for articles using the MeSH terms “Diabetes Mellitus” and “Latent Tuberculosis”, published from 2006 to 2016, in English and Portuguese. The literature review took place in MEDLINE and other evidence-based databases. The Oxford 2011 Levels of Evidence scale was used to assign a level-of-evidence. Eligible articles included those which described a population of adults, with DM diagnosis. The clinical outcome measured was the increase of LTBI incidence.

Results: Of the 210 articles obtained, 5 matched eligibility criteria. The meta-analysis concluded that DM was associated with an increased risk of TB. One of the cohort studies showed that DM as an independent risk factor is associated with only a modest overall increased risk of TB. The other cohort study concluded that it is worthwhile to screen diabetes patients for TB. The last cohort study showed that, overall, people with DM have an increased risk of developing TB, but it accounts for a small proportion of cases in a low TB incidence setting. The guideline recommended that there should be surveillance among diabetic patients in settings with medium to high TB burden.

Conclusion: Evidence remains inconclusive, with some studies suggesting that TB control programs should consider interventions such as active case finding and treatment of LTBI, in diabetic patients. Others claim that the presence of DM alone (without additional risk factors) will not justify screening for LTBI. We will need further large studies, with accurate methodology, that could be translated to a clear message.