

Systematic review: IL-12/23 or IL-23 antagonists and RTIs or ILD

The risk of respiratory tract infections (RTIs) is increased in patients with autoimmune diseases treated with interleukin (IL)-12/23 or IL-23 antagonists, according to the results of a systematic review and meta-analysis reported in the *Journal of the American Academy of Dermatology*, but not the risk of interstitial lung disease (ILD).

The study searched ClinicalTrials.gov, the Cochrane database, EMBASE, Google Scholar, PubMed/MEDLINE, Scopus and conference abstracts to February 2019. There were 54 randomised controlled trials included, which involved 10 907 patients receiving IL-12/23 or IL-23 antagonists and 5175 patients receiving placebo. The trials included brazikumab (n=1), briakinumab (n=8), guselkumab (n=9), risankizumab (n=5), tildrakizumab (n=5) and ustekinumab (n=26).

Compared with placebo, the risk of RTIs was significantly increased in IL-12/23 or IL-23 antagonist recipients (Mantel-Haenszel risk difference [RD] 0.019; p=0.007; number needed to harm=58.8). The risk was significantly increased for briakinumab (RD 0.021; p=0.036) and risankizumab recipients (RD 0.040; p=0.026). The authors note that the rate of trials which permitted concomitant therapies was higher for risankizumab than for other anti-IL-23 therapies, which may suggest that "combination therapy of anti-IL-23 agents with immunosuppressants might work synergistically to surface the risk of RTIs". The increased risk was attributed to upper RTIs (RD 0.017; p=0.006) rather than lower RTIs (RD 0) or viral upper RTIs (RD 0.001).

Compared with placebo, the risk of infectious pneumonia was not significantly increased (RD 0), and nor was the risk of non-infectious ILD (RD 0).

"Our study might support that anti-IL-12/23 and anti-IL-23 therapies can be safely used for autoimmune diseases even during the current COVID-19 pandemic", note the authors, although further studies "particularly during the current pandemic, are necessary to provide enough evidence to ensure the safety of these drugs".

Akiyama S, et al. The risk of respiratory tract infections and interstitial lung disease with IL-12/23 and IL-23 antagonists in patients with autoimmune diseases: a systematic review and meta-analysis. *Journal of the American Academy of Dermatology* : 10 Aug 2020. Available from: URL: <http://doi.org/10.1016/j.jaad.2020.08.026> 803498820