

TUBERCULOSIS INFECTION UNDER ANTI-TNF THERAPY – SHOULD WE BE LOOKING FOR IT?

Sofia Xavier^{1,2,3}, Tiago Cúrdia Gonçalves^{1,2,3}, Francisca Dias de Castro^{1,2,3}, Joana Magalhães^{1,2,3}, Maria João Moreira^{1,2,3}, José Cotter^{1,2,3}

¹Gastroenterology Department, Hospital da Senhora da Oliveira – 4835-044 Guimarães, Portugal

²ICVS/3B's Associate Laboratory, University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal

³Life and Health Sciences Research Institute, School of Medicine, University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal

Background: Anti-tumor necrosis factor (TNF) therapy has revolutionized the treatment of inflammatory bowel disease. However, a major concern is the increased risk of developing tuberculosis (TB), which requires diagnosis and treatment of latent TB infection (LTBI) before initiation of anti-TNF agents. Currently, no recommendations exist regarding the need to regularly re-test patients for latent TB during treatment. We aimed to assess the incidence and to identify risk factors for newly acquired TB infection in patients under anti-TNF agents.

Methods: Adult patients under anti-TNF therapy for at least 12 months were retrospectively assessed. Patients with a negative pre-treatment interferon-gamma releasing assay (IGRA) that repeated IGRA during anti-TNF treatment were reviewed. Patients with a pre-treatment positive IGRA were excluded.

Results: Out of 244 patients under anti-TNF agents (124 infliximab, 120 adalimumab), 87 patients were included. Patients had a mean age of 40±14 years, 64.4% were females, 93.1% were under infliximab and 64.4% had Crohn's disease. Subsequent positive IGRA was identified in 9 patients (10.3% of our sample, 3.7% of all patients under anti-TNF therapy in our center), of which 3 had active TB and 6 had LTBI.

When comparing patients with and without subsequent positive IGRA, no differences were found regarding age (39.6 vs 36.7 years, $p=0.991$) or gender (66.7% vs 64.1% females, $p=0.999$). Patients with subsequent positive IGRA have had close contact with patients with TB more frequently (22.2% vs 0.0%, $p=0.010$), however no differences were found regarding travels to TB-endemic areas (11.1% vs 7.7%, $p=0.548$), professional risk for TB infection (11.1% vs 9.0%, $p=0.999$), concomitant treatment with immunosuppressants (77.7% vs 71.8%, $p=0.999$), use of systemic steroids during anti-TNF treatment (33.3% vs 35.9%, $p=0.999$), diabetes mellitus (11.1% vs 5.1%, $p=0.429$) or active smoking (22.2% vs 20.5%, $p=0.999$). Furthermore, no differences were found in the duration of treatment at the time of subsequent IGRA (30.2 ± 26.7 vs 42.5 ± 30.1 months, $p=0.640$).

Conclusion: In patients under anti-TNF therapy, at least 3.7% of patients have a subsequent positive IGRA after treatment beginning. In our sample, only close contact with patients with TB was associated with a subsequent positive IGRA. Therefore, considering that infection during treatment is present in a non-negligible percentage of patients, and most of the classical risk factors can not be used to identify at-risk patients, physicians may consider to routinely repeat IGRA in patients under anti-TNF therapy.