

Can we safely start biological therapy in rheumatic patients with prior history of active tuberculosis?

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Introduction

An increased risk of active tuberculosis (TB) has been reported in patients with rheumatic diseases treated with biological therapies, especially TNF inhibitors. Most TB cases result from an activation of a previous latent infection (LTB). The risk of TB reactivation in rheumatic patients who had previously treated active TB is currently not fully understood. In addition, current screening procedures and decision for LTB treatment in these patients have not been thoroughly addressed in guidelines for TB prevention. The aim of this study was to analyze patients from a single center with prior history of active TB who started biological therapies.

Methods

We included patients from Hospital Santa Maria treated with biological therapy and registered in Reuma.pt who had a diagnosis of active TB preceding treatment start. Data were obtained through Reuma.pt and clinical files.

Results

Eight patients with previous active pulmonary TB were identified, 4 with rheumatoid arthritis (RA), 3 with ankylosing spondylitis (AS) and 1 with psoriatic arthritis (PsA) - Table 1.

Table 1 - Characteristics of the 8 patients with history of active TB before the start of biological treatment.

		Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Patient 7	Patient 8
Sex		Male	Female	Female	Female	Female	Female	Female	Female
Rheumatic disease		AS	AS	AS	RA	RA	RA	RA	PsA
Active TB site		Pulmonary	Pulmonary	Pulmonary	Pulmonary	Pulmonary	Pulmonary	Pulmonary	Pulmonary
TB treatment (months)		N/A	12	12	18	N/A	24	18	N/A
Year (age, years) of biological start		2005 (63)	2007 (50)	2005 (37)	2010 (58)	2001 (73)	2009 (60)	2005 (58)	2003 (46)
Time TB-biological (years)		37	31	17	45	50	47	46	44
Biological		Etanercept	Etanercept	Etanercept	Golimumab	Infliximab	Tocilizumab	Etanercept	Infliximab
DAS28 / ASDAS-ESR [¥]		3.8	3.4	3.6	4.4	7.1	6.5	4	5.3
Screening [§]	TST	11mm	N/A	10mm	0mm	N/A	0mm	15mm	20mm
	CXR	+	+	+	—		—	+	+
	Epidemio	+	+	+	+		+	+	+
LTB treatment		Yes, INH 9M	Yes, INH 9M	Yes, INH 11M	Yes, INH 6M	No	No	Yes, INH 9M	Yes, INH 9M
TB on biological (months)		No	No	No	No	No	No	No	Yes (18), reinfection [Ⓜ]
Biological stop (months)		No	Switch (2.7)	No	Yes (6.2)	Yes (49.4)	Yes (6)	Yes (44.5)	Yes (18)

[¥]Disease activity score 28-joint (DAS28) obtained for rheumatoid arthritis (RA) and psoriatic arthritis (PsA) patients, ankylosing spondylitis disease activity score - erythrocyte sedimentation rate (ASDAS-ESR) for ankylosing spondylitis (AS) patients; [§]including epidemiological risk factors (Epidemio), two-step tuberculin skin test (TST) and chest X-ray (CXR), IGRA non-available; [Ⓜ]pulmonary tuberculosis (TB) following contact with an active TB case. INH, isoniazid; LTB, latent tuberculosis.

TB occurred on average 40 ± 11 (minimum 17, maximum 50) years before the start of biological therapy. Five patients were treated for active TB during 12 (Patients 2 and 3), 18 (Patients 4 and 7) and 24 months (Patient 6). For the remaining 3 patients, accurate TB treatment data was not available. Six patients were treated for LTB with isoniazid, patient 5 was not screened because she started therapy prior to screening guidelines and patient 6 was considered not to require LTB treatment based on screening tests. Seven patients were started on anti-TNF agents and only one developed pulmonary TB, following contact with a documented case (patient 8).

Conclusions

In our center, patients with previously treated active TB were screened and treated for LTB. None of the patients developed TB reactivation. The only reported case was considered a new infection.