

Medical or Research Professionals / Clinicians

Topic area: *Clinical topics by disease*

Topic: **13. Rheumatoid arthritis - anti-TNF therapy**

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VALIDATION OF THE RABBIT RISK SCORE FOR SERIOUS INFECTIONS

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My abstract has been or will be presented at a scientific meeting during a 12 months period prior to EULAR 2012:

No

Is the First Author of this abstract an Undergraduate or a Student?: No

Background: Recently we published a score[#] which enables the calculation of the risk of serious infections in individual patients with rheumatoid arthritis (RA) treated either with TNF α inhibitors or conventional DMARDs. Our original analysis was based on patients enrolled in the German biologics register RABBIT between May 2001 and December 2006. Taking changing risks over time (resulting from selection processes and clinical improvement) into account our data provided, for the first time, detailed information about the expected absolute risk of serious infection in individual patients.

Objectives: To evaluate these findings in an independent sample of patients not included in the previous analysis.

Methods: We used data from patients enrolled in RABBIT after 1st of January 2009 at start of treatment with TNF α inhibitors or conventional DMARDs. Using the RABBIT risk score, we calculated for each patient the expected likelihood of a serious infection based upon the individual risk profile. The expected numbers of serious infections were then compared to the observed numbers in the total cohort and within defined subgroups of patients.

Results: Data of 1327 RA patients treated with TNF α inhibitors and of 1276 patients treated with DMARDs were available for the analysis. There was a very good agreement between observed and expected rates of serious infections in the evaluation sample (see table). Of note, the agreement was also high in subgroups of patients with a higher risk of infections.

	n	Patient years	Exp. n	Obs. n	Rate exp. /100 pyrs	Rate obs. /100 pyrs
TNF α inhibitor	1327	1049	31.5	33	3.0	3.2
Conv. DMARD	1276	1017	14.8	13	1.5	1.3
TNF α inhibitor and ≥ 1 risk factor*	556	425	18.1	22	4.3	5.2
Conv. DMARD and ≥ 1 risk factor*	628	535	10.0	9	1.9	1.7
TNF α inhibitor, ≥ 1 risk factor* and GC	110	64	6.4	6	10.0	9.4
Conv. DMARD, ≥ 1 risk factor* and GC	63	38	1.9	3	5.0	7.9

Table. Number of patients, exposure time, observed (obs), expected (exp) numbers of serious infections and corresponding rates /100 patient years.

*: at least one out of: chronic lung disease, chronic renal disease, age above 60 years.

GC: treatment with glucocorticoids ≥ 7.5 mg/d prednisolone equivalent.

Conclusions: The evaluation of the RABBIT risk score for serious infections in individual patients showed high agreement between observed and expected rates of serious infections in an independent sample of RA patients. The agreement was also high for patients at high risk of infections. The RABBIT risk calculator is therefore useful for rheumatologists to identify patients at increased risk and avoid treatment combinations with a very high risk for serious infections.

Disclosure

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References: # Strangfeld A, Eveslage M, Schneider M, Bergerhausen HJ, Klopsch T, Zink A, Listing J. Treatment benefit or survival of the fittest: what drives the time-dependent decrease in serious infection rates under TNF inhibition and what does this imply for the individual patient? *Ann Rheum Dis* 2011; 70(11):1914-20.

Disclosure of Interest: None Declared