Medical or Research Professionals/Clinicians

Topic area: Clinical topics by disease

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HIGH RISK OF DEVELOPING FATAL INFECTIONS IN RA PATIENTS WITH CONGESTIVE HEART FAILURE

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My abstract has been or will be presented at a scientific meeting during a 12 months period prior to EULAR 2014: No

Is the first author applying for a travel bursary?: No

Background:

Patients with rheumatoid arthritis (RA) have a higher incidence of congestive heart failure (CHF) than the general population. This frequent comorbidity also contributes to an increased mortality in RA.

Objectives:

To investigate the impact of treatment with biologics and known clinical risk factors on the mortality of RA patients with prevalent CHF.

Methods:

We used data from the German biologics register RABBIT with 10,671 RA patients included at start of a synthetic or biologic DMARD after at least one DMARD failure. In 242 patients, CHF was reported as comorbid condition at enrollment in the cohort. To examine associations between risk factors and mortality we applied multivariate Cox regressions.

Results:

Compared to the rest of the cohort, patients with CHF were on average 12 years older, more frequently males, had a higher level of disease activity (based on DAS28), considerably more comorbidities and lower functional capacity (Table). They were more frequently treated with biologics. Age above 60, comorbid conditions like chronic lung or chronic renal disease, low functional capacity and treatment with biologics are known risk factors for serious infections [1)]. In this high-risk group of patients we observed 106 serious infections in 662 patient years (PY) (16.0/100 PY, CI:13.1-19.4) which is nearly 5 times higher than the observed incidence in the remaining sample (3.4/100 PY). We also observed a shift in the spectrum of the infections towards a higher incidence of pneumonia (30% vs. 21% in the non-CHF patients) and sepsis (20% vs. 15%). 16 out of 106 serious infections in CHF patients had a fatal outcome (15.1%) compared to 136/1211 infections (11.2%) in non-CHF patients. The combination of higher incidence of serious infections with a higher rate of fatal outcome resulted in a significantly increased mortality due to serious infections in CHF patients (24 .1/1000 PY) compared to non-CHF patients (4.0/1000 PY).

Within the subsample of patients with prevalent CHF we furthermore observed an increased mortality for males, patients of higher age, with chronic lung disease, with higher levels of C-reactive protein, and low functional capacity (last 2 parameters assessed at follow-up). Adjusted for these risk factors, a significantly increased mortality was observed in CHF patients who suffered from at least one (non-fatal) serious infection after enrollment: adjusted hazard ratio (HR) 9.3 [95%CI: 5.0-17.2]. Treatment with >=15 mg prednisone was associated with an adjusted HR of 1.9 [0.9-4.1] whereas treatment with TNFα inhibitors or other biologics did not increase mortality risk.

Table: Baseline characteristics, CHF=congestive heart failure at enrollment in RABBIT

Image/graph:

	Prevalent CHF n=242	No CHF n=10,429
Male (%)	33.9	23.1
Age (mean, sd)	67.6 (8.5)	55.7 (12.4)
Hypertension (%)	78.5	36.3
Coronary heart disease (%)	43.8	5.2
Chronic lung disease (%)	7.4	2.9
Chronic renal disease (%)	24.4	3.2
Osteoporosis (%)	46.7	18.3
DAS28 (mean, SD)	5.9 (1.2)	5.2 (1.3)
CRP (mean, SD)	44.3 (62)	23.2 (30.8)
FFbH [% of full function] (mean, SD)	43.8 (23.6)	63.1 (23.1)
Only synthetic DMARD treatment (%)	14.4	33.7
Anti-TNFα treatment (%)	52.1	51.1
Treatment with other biologics (%)	33.4	15.1

Conclusions:

Patients with CHF are at increased risk of serious infections. Pneumonia and sepsis are of specific concern. Infections occurring in this high risk patient group should be carefully observed and effectively treated.

References: [1] Zink A et al: Evaluation of the RABBIT risk score for serious infections. Ann Rheum Dis, [Epub] doi:10.1136/annrheumdis-2013-203341.

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