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Disease activity and outcome in pregnancies of patients with SpA - data from the German pregnancy register RHEKISS

Anja Weiß*[1], Christina Bungartz[1], Jutta Richter[2], Susanna Spaethling-Mestekemper[3], Xenofon Baraliakos[4], Peer-Malte Aries[5], Rebecca Fischer-Betz[2], Anja Strangfeld[1]

[1]German Rheumatism Research Centre, Epidemiology Unit, Berlin, Germany, *[2]University Hospital Düsseldorf, Department of Rheumatology & Hiller Research Unit, Düsseldorf, Germany*, *[3]Rheumapraxis München-Pasing, Rheumatology, München, Germany*, *[4]Rheumazentrum Ruhrgebiet, Rheumatology, Herne, Germany*, *[5]Rheumatologie, Rheumatology, Hamburg, Germany*

Background:

Spondyloarthritis (SpA) is a severe chronic inflammatory disease, which affects quality of life and functional status. It frequently occurs in women of childbearing age. Active disease and TNFi discontinuation at early pregnancy were found to be risk factors for flares during pregnancy (1).

Objectives:

To compare disease activity during pregnancy in patients with or without bDMARD exposure at conception and during pregnancy and to assess pregnancy outcomes.

Methods:

RHEKISS is a prospective longitudinal cohort study including patients with confirmed diagnose of inflammatory rheumatic disease. Pregnant patients are eligible to be enrolled until the 20th week of gestation regardless of drug treatment. During observation, information on treatment, disease and pregnancy course, and outcome is collected from rheumatologists and patients. For this analysis, pregnancies of patients with SpA were selected and stratified into three groups according to their exposure to bDMARDs.

Results:

Of 140 SpA pregnancies included, 74 (53%) were not exposed to bDMARDs at conception (group 1), 38 (27%) were exposed to bDMARDs at conception, but not during pregnancy (group 2) and 28 (20%) were continuously exposed to bDMARDs at conception and during pregnancy (group 3). Certolizumab (50%), Adalimumab (20%), Etanercept (8%) and Infliximab (8%) were the most frequently prescribed bDMARDs at beginning of pregnancy. Baseline characteristics according to treatment exposure are shown in table 1. Frequency of flares was highest in group 2: 21%, 38%, and 39% of patients flared during the 1st, 2nd, and 3rd trimester. These rates were 20%, 25%, and 21% in group 1 and 8%, 20%, and zero in group 3. The difference in flare rates was also mirrored in the course of physician assessed global disease activity (fig. 1). Whereas patients in group 1 seemed to have a quite stable disease activity during pregnancy, those who were in group 2 had an increasing activity of disease during pregnancy with an even higher increase of disease activity after giving birth. Patients in group 3 had the lowest disease activity.

Of 137 singleton pregnancies, 130 (95%) ended in live birth. Of 6 spontaneous abortions 2 were in every of the three groups. One pregnancy in group 1 was terminated in gestational week 22 due to suspect malformation. One baby of the triple pregnancy was born and two aborted. All babies of the twin pregnancies were born healthy.

Conclusion:

SpA patients treated with bDMARDs at conception are not at higher risk for adverse pregnancy outcomes. Our results in a larger patient population confirmed that discontinuation of bDMARDs after conception is associated with increased disease activity during pregnancy and after birth and a higher risk of flares.

References:

(1) van den Brandt S et al., Arthritis Res Ther. 2017; 19(1):64.

Parameter	no bDMARD at conception (group 1) n=74	bDMARD at conception and discontinued during pregnancy (group 2) n=38	bDMARD at conception and continued during pregnancy (group 3) n=28	Total n=140
Singleton	72 (97)	37 (97.4)	28 (100)	137 (97.9)
Twin	1 (1.4)	1 (2.6)	0	2 (1.4)
Triple	1 (1.4)	0	0	1 (0.7)
New-York criteria fulfilled	21 (33)	17 (49)	10 (48)	48 (40)
disease duration in years, mean (SD)	6.4 (5.9)	7 (4.1)	5.8 (4)	6.4 (5.1)
age*, mean (SD)	33.4 (4.9)	32.3 (4)	31.6 (3.4)	32.7 (4.4)
severity of illness*: asymptomatic	4 (6)	0 (0)	3 (14)	7 (6)
mild	31 (48)	6 (17)	4 (19)	41 (34)
moderate	24 (38)	21 (60)	14 (67)	59 (49)
severe	5 (8)	8 (23)	0	13 (11)
HLA-B27 positive	41 (62)	24 (80)	15 (75)	80 (69)
CRP in mg/l *, mean (SD)	6.6 (8.2)	5.4 (8.2)	5.2 (4.9)	6 (7.6)
CRP >5mg/l *	25 (41)	9 (30)	8 (35)	42 (37)
physician global* (NRS 0-10), mean (SD)	2.6 (2)	2.3 (2.5)	1.7 (1.4)	2.4 (2.1)
BASDAI* (0-10), mean (SD)	3.2 (2)	2.9 (2.3)	2.8 (1.5)	3.1 (2)
patient global* (NRS 0-10), mean (SD)	3.3 (2.7)	3 (2.8)	3 (2.3)	3.1 (2.6)

Table 1: Baseline characteristics; numbers are n (%) if not otherwise specified; * value at beginning of pregnancy: first 22 weeks after conception

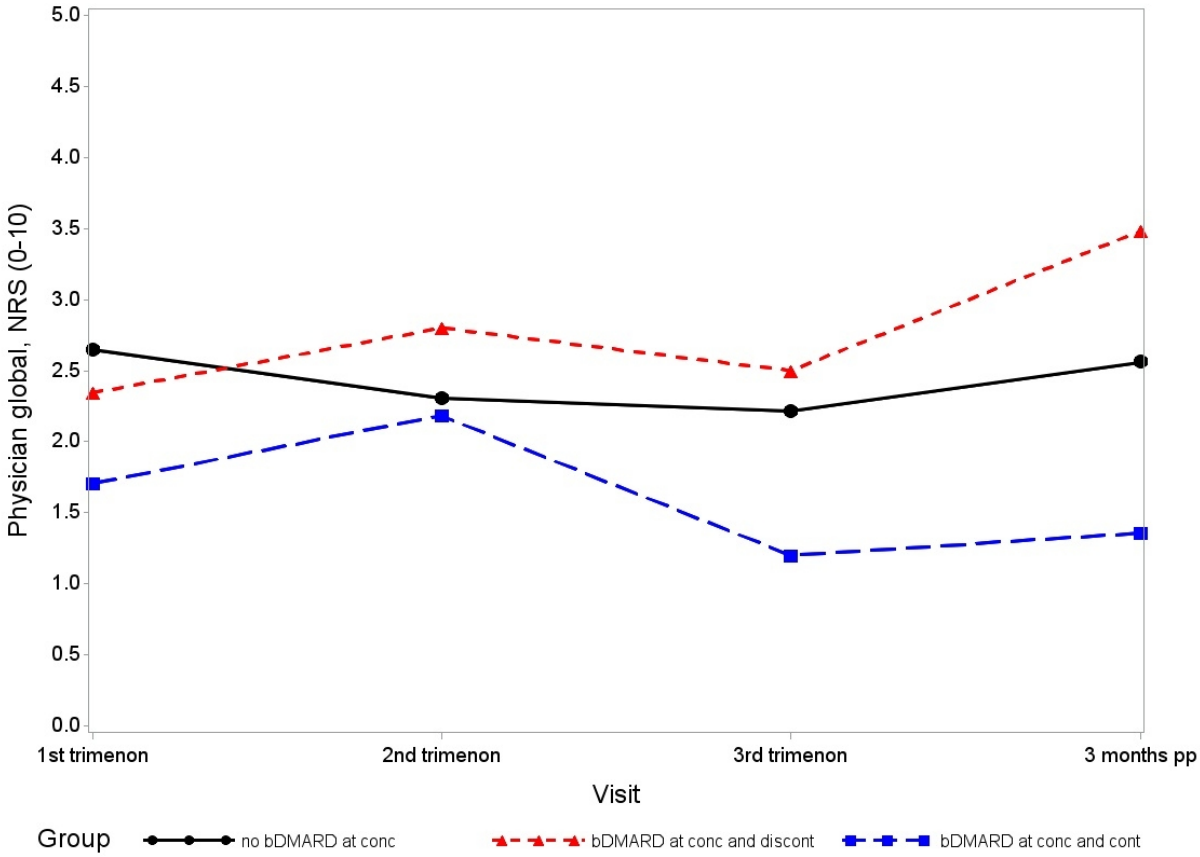

Figure 1: Course of physician assessed global disease activity

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