

Factors associated with pregnancy-related concerns in women with inflammatory rheumatic diseases – an analysis of a nationwide pregnancy cohort



Yvette Meissner¹, Bernhard Eickhoff¹, Cornelia Glaser², Jörg Henes³, Susanna Späthling-Mestekemper⁴, Christof Specker⁵, Rebecca Fischer-Betz⁶, Anja Strangfeld^{1,7}

¹ German Rheumatism Research Centre, Epidemiology and Health Services Research, Berlin; ² Department of Rheumatology and Clinical Immunology University Medical Center Freiburg, Freiburg; ³ Centre for Interdisciplinary Clinical Immunology, Rheumatology and Autoinflammatory Diseases, University Hospital Tuebingen, Tuebingen; ⁴ Rheumatology Practice München-Pasing; ⁵ Department of Rheumatology and Clinical Immunology, Kliniken Essen-Mitte; ⁶ Clinic for Rheumatology & Hiller Research Unit Rheumatology, UKD, Medical Faculty, Heinrich-Heine-University Duesseldorf; ⁷ Department of Rheumatology and Clinical Immunology, Charité University Medicine Berlin; all Germany

German Rheumatism Research Centre Berlin, Epidemiology and Health Services Research

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Conclusions

At least one in five women with IRD is “very concerned” about pregnancy and infant health due to the underlying rheumatic disease. A higher RAID score, nulligravidae, treatment changes and younger age were associated with higher levels of concern. Therefore, patient concerns should be an essential part of individual counselling for women with IRD who want to become pregnant or are already pregnant.

Background

Pregnancies in women with chronic diseases are often accompanied by concerns about possible complications during pregnancy and about the health of the child^[1]. In women with inflammatory rheumatic diseases (IRD) this can lead to a reduced number of offspring^[2]. To date, surveys and interviews, but no data quantifying these worries and factors influencing them, have been published.

^[1]Lange et al. Z Geburtshilfe Neonatal 2015;219(4):161-9. ^[2] Clowse et al. Arthritis Care Res 2012;64(5):668-74.

Objectives

To investigate and quantify pregnancy concerns in women with various underlying IRD, and to identify factors that have an impact on these sorrows.

Patients and Methods

- Data source: German pregnancy registry Rhekiss, a nationwide, multicentre, web-based longitudinal cohort study, initiated in 2015 to investigate pregnancies and related issues in women with various IRD
- Enrolment: Women with IRD can either be enrolled if they are planning a pregnancy (cohort 1) or if they are already pregnant prior to gestational week 20 (cohort 2)
- Data reporting: At regular, pre-defined follow-up visits by rheumatologist and patient
- Selection criteria: Women who had answered the question at baseline visit regarding their concerns about pregnancy and child’s health due to the IRD between 09/2015 and 10/2022
- Data analysis:
 - Descriptive analysis of categorical answers and patient characteristics
 - Impact of different factors associated with patients’ anxieties was estimated by multivariable ordinal logistic regression using the proportional odds model and combining the two cohorts. Missing values were replaced by single imputation.

Results

Table 1: Characteristics of patients stratified by cohort and by level of concern.

	Cohort 1: 455 women				Cohort 2: 784 women			
	Not at all	Not really	A little	A lot	Not at all	Not really	A little	A lot
Number of patients	36	61	219	140	55	155	398	176
Age in years (mean)	32.0	32.7	32.0	31.5	34.3	32.9	32.6	32.1
Disease duration in years (mean)	7.9	7.7	8.2	8	8.6	8.7	7.9	7.7
Moderate to severe disease	50.0%	58.0%	61.3%	61.1%	41.9%	51.2%	52.4%	61.9%
RAID score (mean)	1.4	1.9	2.0	3.2	1.0	1.7	2.3	3.2
Current flare	22.2%	11.1%	10.5%	15.8%	0	4.7%	11.1%	12.3%
Treatment change*	31.4%	54.1%	53.9%	61.4%	35.3%	40.3%	44.5%	45.8%
Nulligravidae	50.0%	68.5%	69.3%	70.3%	45.2%	54.7%	53.8%	59.9%
# Comorbidities (mean)	0.4	0.4	0.5	0.6	0.8	0.6	0.5	0.8

*Either due to the plan to become pregnant or due to the ongoing pregnancy.
RAID (Rheumatoid Arthritis Impact of Disease): seven-item composite index to assess the disease burden in rheumatic diseases, range 0-10 with higher numbers indicating worse status.

Figure: Level of concerns stratified by cohort and by IRD diagnosis.

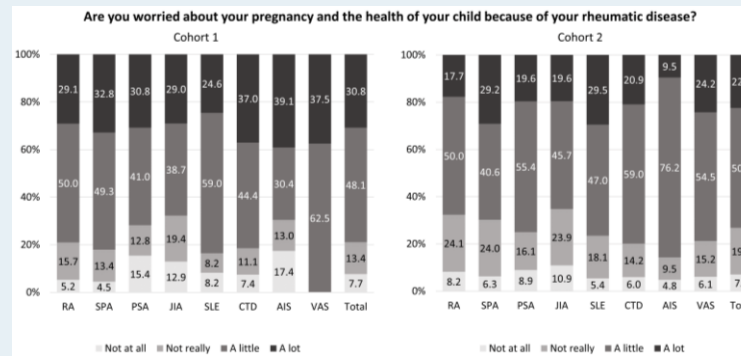


Table 2: Factors associated with higher level of concerns estimated by logistic regression.

	Odds ratio [95% confidence interval]
RAID score increase	1.35 [1.27; 1.43]
Nulligravidae	1.29 [1.01; 1.65]
Treatment change	1.26 [1.00; 1.60]
Age	0.96 [0.94; 0.99]
# Comorbidities	1.13 [0.98; 1.29]
Cohort 2 vs. cohort 1	0.74 [0.60; 0.93]

*Abbreviations: AIS, autoinflammatory syndrome; CTD, connective tissue disease (w/o SLE); JIA, juvenile idiopathic arthritis; PSA, psoriatic arthritis; RA, rheumatoid arthritis; SLE, systemic lupus erythematosus; SPA, spondyloarthritis; VAS, vasculitis.

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