Pregnancy outcomes in patients with axial spondyloarthritis – a first analysis of a European collaboration of pregnancy registries

Yvette Meissner[1], Nathalie Costedoat-Chalumeau[2], Frauke Förger[3], Doreen Goll[4], Anna Moltó[5], Rebecca Özdemir[6], Marianne Wallenius[7], Anja Strangfeld[1], Rebecca Fischer-Betz[8]

[1]Deutsches Rheuma-Forschungszentrum Berlin, Programmbereich Epidemiologie und Versorgungsforschung, Berlin, Germany; [2] AP-HP, Cochin Hospital, Internal Medicine Department, Referral center for rare autoimmune and systemic diseases, Paris, France ; Université de Paris, CRESS, INSERM, INRA, F-75004 Paris, France; [3]Department of Rheumatology, Immunology and Allergology, University Hospital (Inselspital) and University of Bern, Bern, Switzerland; [4]Patient representative, Berlin, Germany; [5]Assistance Publique - Hopitaux de Paris, Rheumatology Department, Paris, and U-1153, INSERM, Université de Paris, Paris, France; [6]Patient representative, Duisburg, Germany; [7]University Hospital and Norwegian University of Science and Technology, Trondheim, Norway; [8]Department for Rheumatology and Hiller Research Institute, University Clinic Duesseldorf, Germany;

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Background

Axial spondyloarthritis (axSpA) can affect women in their childbearing age. Data on pregnancy in axSpA patients are mainly retrospective and highly heterogeneous [1].

[1] Giovannopoulou E et al. Curr Rheumatol Rev. 2017;13(3):162-9.

Objective

The aim of this analysis was to investigate pregnancy outcomes and health of live born children in women with axSpA from cohort studies.

Patients and Methods

Data sources: Data of four European pregnancy registries that collect data prospectively and collaborate in the European Network of Pregnancy registries in Rheumatology (EuNeP):

- EGR2 (France),
- RePreg (Switzerland),
- RevNatus (Norway)
- Rhekiss (Germany).

Patient selection:

- Women with a diagnosis of axSpA
- Enrolment in one of the registries
- Known pregnancy outcome reported until June, August or September 2019.

Statistics: Each registry analysed its data descriptively according to a pre-defined study protocol and provided the results to the coordinating centre. All summary measures were compiled and compared

Results

A total of 328 pregnancies in 288 women were investigated. Mean age of patients was comparable between registries ranging from 31 to 33 years.

However, disease duration (3-8 years) and proportion of patients with a positive HLA-B27 (64-74%) varied (Table 1). The axSpA diagnosis was either classified by ASAS criteria (fulfilment in EGR2: 93%, RePreg: 65%, RevNatus: 86%) or by ASAS criteria for axial/ peripheral SpA (Rhekiss: 81/ 34%).

Table 1: Maternal and disease characteristics

	EGR2 (FR)	RePreg (CH)	RevNatus (NO)	Rhekiss (DE)
No. of pregnancies	45	31	160	92
No. of patients	44	31	125	88
Age in years	32.0 ± 4.2	31.4 ± 4.0	30.5 ± 4.5	33.2 ± 4.4
Disease duration in years	6.0 ± 5.6	7.7 ± 4.6	3.2 ± 3.3	6.2 ± 5.3
HLA-B27 positive	26 (66.7)	23 (74.2)	79 (71.2)	54 (73.0)
Pre-gestational diabetes	0	0	1 (0.6)	1 (1.4)
Inflammatory bowel disease	0	0	4 (2.6)	5 (7.2)
Uveitis	0	0	3 (1.9)	3 (4.3)
BMI	26.5 ± 4.8	22.6 ± 2.5	24.4 ± 4.3	23.4 ± 4.3

Results are presented as mean ± SD or number (percentage)

Preeclampsia occurred in 0-4% and gestational diabetes in 6-9% of patients. Rates for preterm birth were ≤5%, and congenital malformations were reported in 4 out of 287 neonates (Table 2).

Table 2: Pregnancy characteristics, obstetric and neonatal outcomes

	EGR2 (FR)	RePreg (CH)	RevNatus (NO)	Rhekiss (DE)
WGA at 1st pregnancy visit	11.9 ± 8.15	19.7 ± 9.4	12.9 ± 5.7	13.4 ± 5.4
Patients with 1 pregnancy	43 (95.5)	31 (100.0)	101 (80.8)	84 (95.5)
Primigravidae	18 (40.0)	15 (48.4)	47 (29.4)	37 (45.1)
Adverse events of interest				
Preeclampsia	1 (4.4)	0	4 (2.6)	0
Gestational diabetes	4 (8.9)	2 (6.5)	n.a.	5 (6.2)
Pregnancy outcomes			*(5 Outcomes missing)*	*(1 Outcome missing)*
Elective termination	1 (2.2)	0	2 (1.3)	0
Miscarriages (< WGA 20)	2 (4.4)	0	13 (8.4)	4 (4.4)
Pregnancy loss (>WGA 20)	2 (4.4)	0	0	0
Live birth	40 (88.9)	31 (100.0)	140 (90.3)	87 (95.6)
Number of live born neonates				
Singleton pregnancies	40	30	139	78
Multiple pregnancies	0	2	2	4
Neonatal outcomes, only singleton pregnancies*				
WGA at delivery	39.1 ± 1.2	39.5 ± 1.5	38.9 ± 2.3	39.4 ± 2.0
Preterm birth	0	0	6 (4.3)	4 (5.4)
Birth weight in g	3253 ±395[$]	3314 ± 519	3446 ± 526	3377 ± 522
Congenital malformation	0	0	n.a.[#]	4 (5.1)

*Results are presented as mean ± SD or number (percentage). WGA: gestational age in weeks. *Data for twins are not shown. [#]Malformations can be retrieved by national birth registry with a lag time of 2 years. [$]Missing information for 7 infants.*

Conclusions

Differences in study design and classification criteria result in slightly different patient populations in each registry. The outcome of pregnancies was favourable. Preterm birth rates are within rates reported by the WHO for the EU general population. However, a selection bias of rather planned and well-controlled pregnancies cannot be ruled out. This is the first collaborative analysis of four European pregnancy registries in rheumatology. Descriptive data were combined, and will be – in a next step – pooled together.

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