Reproductive health outcomes in women with psoriatic arthritis

There are now high-quality data showing rheumatoid arthritis improves in pregnancy and flares post partum, and that active disease in pregnancy may be associated with adverse fetal outcomes such as low birth weights. However, in psoriatic arthritis (PsA), the data are less clear. Previous studies examining the disease course of PsA, in and around pregnancy, have found conflicting results.[1–3] Only one of those studies was prospective and many lack disease activity scores. Much of the data also predate the widespread use of biologic disease-modifying antirheumatic drugs (bDMARDs) in pregnancy and so may not reflect current clinical practice. A recent abstract reviewing a Swedish patient registry reported increased odds of preterm birth, induction of labour and caesarean section in PsA pregnancies compared with population comparators.[4]

Consecutive female patients with PsA planning pregnancy or were pregnant seen by our multidisciplinary rheumatology reproductive health service were managed using our evidence-based reproductive care pathway and followed prospectively. Age,

Table 1 Patient characteristics, pregnancy and fetal outcomes in psoriatic arthritis

Patients	14
Mean age, years, at referral (range)	34 (25–37)*
Patients who became pregnant	12
Pregnancies	20
Patients who failed to become pregnant	2
Patients referred with a further pregnancy wish	4
Medications in pregnancy	
DMARD therapy (including oral steroids)	14
bDMARD	9†
Oral prednisolone	5
Sulfasalazine	2
Hydroxychloroquine	1
NSAIDs	2
Aspirin	2
Pregnancy outcomes	
Live births	13‡
Vaginal deliveries	7
Caesarean sections	5 (3 emergency)
Currently pregnant	2
Postpartum complications	2§
Fetal outcomes	
Birth weight, kg, mean (range)	3.54 (2.78–4.39)¶
Gestational age, weeks, mean (range)	39.62 (36–41.71)**
Spontaneous abortions	6
First trimester	4
Second trimester	2††
Breast feeding at 6 weeks	8

*National average=32 years.
†6 discontinued in pregnancy (5 in the first trimester, 1 recommenced in the second trimester) and 1 stopped in the second trimester).
‡Includes one set of twins.
§Grade 4 vaginal tear, patient on infliximab, discontinued in the second trimester, 1 caesarean section wound infection.
¶Nationally=3.49 kg.
**Available for 11 births.
††1 hypercoiled cord, 1 trisomy 7.
DMARDs, disease-modifying antirheumatic drug; NSAIDs, non-steroidal anti-inflammatory drugs; bDMARD, biologic disease-modifying antirheumatic drug.

medications, disease control, and maternal and fetal outcomes were reviewed. There are no validated disease activity criteria for PsA in pregnancy. Thus, we used the Disease Activity Score-28-C-reactive Protein 3 (DAS28-CRP-3) as this has been validated for rheumatoid arthritis in pregnancy.[5]

In total, 14 patients were reviewed. Twelve of these patients went on to become pregnant. There were 20 pregnancies in total. Eight patients had one pregnancy. Four patients had multiple pregnancies. Two patients had three pregnancies (one of whom is currently pregnant), one patient was pregnant twice, and one patient had four pregnancies and is currently pregnant. Two patients failed to become pregnant. On 11 occasions, patients were reviewed antenatally (while pregnancy planning). Pregnancy outcomes are shown in table 1.

In five cases, oral prednisolone was used during pregnancy, three had commenced prior to pregnancy, while in two cases it was commenced during pregnancy (one patient's bDMARD therapy was 'on hold'). Sulfasalazine and hydroxychloroquine were continued throughout pregnancy and post partum. In nine cases, patients had taken bDMARD therapy at some time during pregnancy. On five occasions, this was discontinued in the first

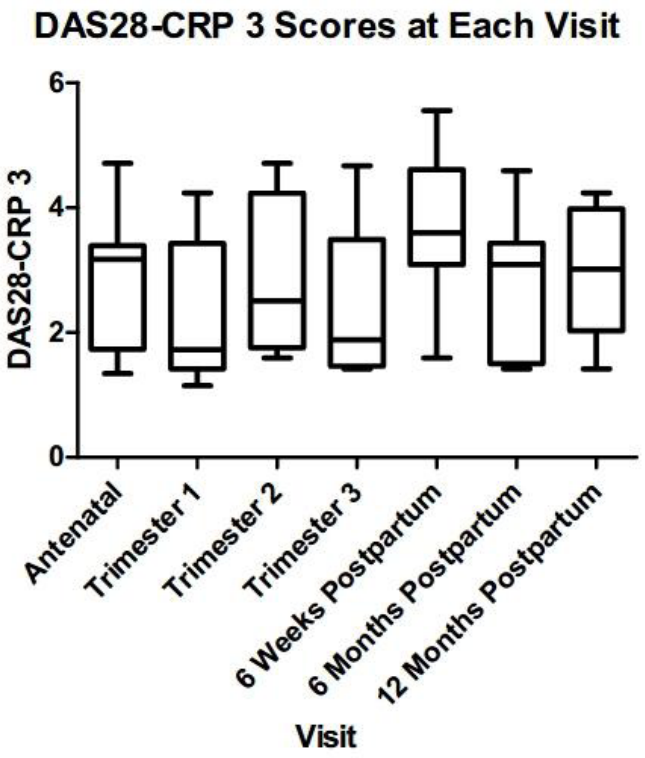

Figure 1 Disease activity before, during and after pregnancy

trimester (one recommenced in the second trimester) and one stopped in the second trimester. The bDMARD was continued throughout in three pregnancies.

Disease activity is shown in figure 1. Overall, the mean disease activity scores decreased during pregnancy and increased post partum. After applying the European League Against Rheumatism-defined response criteria disease activity, almost half of the women had at least a moderate response during pregnancy and more than one-third had at least a moderate flare post partum, particularly at 6 weeks. The postpartum flare may be underestimated as medication use was remarkably increased after delivery. At 6 weeks, in five cases the bDMARD therapies had already been restarted. In two cases, the patients missed this appointment. One patient was started on methotrexate at their 6-week review.

In conclusion, we observed that PsA disease control generally improved during pregnancy and flared post partum, replicating the largest previous study on this topic.[3] Awareness of this is important to ensure prompt reintroduction of disease-modifying antirheumatic drug therapy post partum when appropriate. Miscarriage rates were higher in our patients than the general population (32% vs 20%), while breastfeeding rates at 6 weeks (62% vs 55%) and birth weights were similar.[6]

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