Splošna bolnišnica Celje

Experiences in the Management of Pregnancy and Pregnancy Outcomes of Women with IBD on Biologic Therapies

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1 Introduction

The diagnosis of IBD raises many questions; these include concerns about sexuality, disease heritability, and the impact of medications and disease activity on fertility, pregnancy outcomes, and lactation. Uncertainty about the health of the offspring may influence patients' choices in family planning. Therefore, the management of patients who wish to conceive or who are pregnant requires specialized counseling and appropriate management. (1) In our center, we currently manage 399 patients undergoing advanced therapies. This study provides an overview of the management of pregnant women with IBD in our center, with a focus on pregnancy outcomes.

2 Objectives

The objective of this study was to collect and analyze data on women with IBD who conceived while receiving biologic therapy or were treated with it during pregnancy. We aimed to evaluate:

- **pregnancy outcomes**, including mode of **conception**,
- **disease activity** during pregnancy,
- **treatment strategies**,
- **mode of delivery**,
- **neonatal outcomes** and breastfeeding practices.

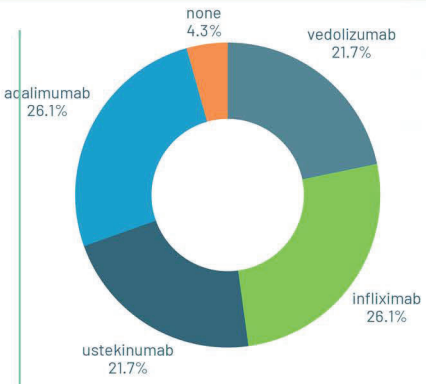
3 Methodology

We performed a retrospective, single-center study, including women with IBD who conceived while receiving biologic therapies or were treated with them from 2017 to 2025.

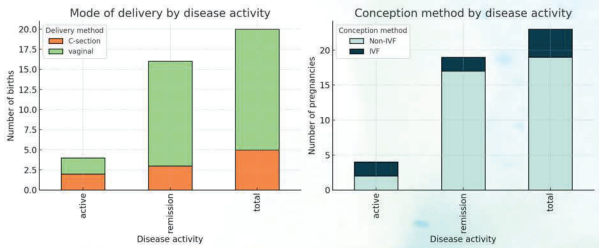
Clinical data were collected from patient records or additional interviews and included maternal age, disease activity at conception and during pregnancy, and type of biologic therapy. Pregnancy-related variables comprised mode of conception, type of delivery, gestational age at delivery, and pregnancy complications. Neonatal outcomes included sex, birth weight, and complications after birth. Breastfeeding practices after delivery were also recorded. Data were analyzed using appropriate statistical tests.

3 Results

- **7** women conceived and carried their pregnancies.
- A total of **20 children** have been born to date, and one pregnancy was electively terminated following the prenatal diagnosis of a genetic abnormality.
- **11 women** had one child, one woman gave birth to twins, and two women have three children.
- **3 women** are currently pregnant.



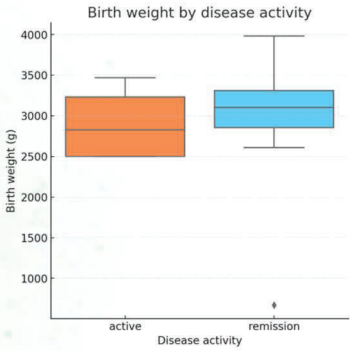
The majority of patients (52.2%) were treated with TNF-alpha inhibitors



Cesarean section was more frequent in women with active disease compared to those in remission (50% vs. 19%), although the difference did not reach statistical significance ($p = 0.25$). Regarding conception, 4 pregnancies occurred after IVF and 19 were spontaneous or natural.

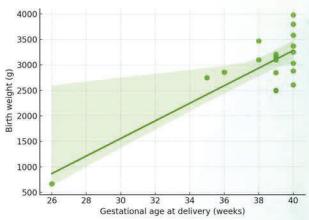
Women with active disease were more likely to require IVF compared to those in remission (50% vs. 11%), but again, this difference was not statistically significant ($p = 0.12$).

The majority of patients (15/23, 65%) were during pregnancy **followed in a specialized high-risk pregnancy clinic**, while 26% were not, and data were unavailable for 9%. **Breastfeeding** was reported in 75% of women, while 25% did not breastfeed (data available for 20 out of 23 pregnancies).

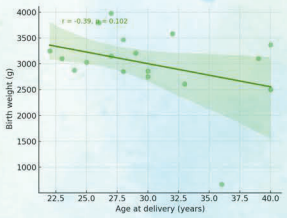


Biologic therapy **was discontinued** following established protocols, except for two patients who independently discontinued treatment during the second trimester, deviating from the recommended regimen.

- **The mean gestational age** at the time of the last biologic administration was **31.9** ± 7.5 weeks (median 36, IQR 32–36; range 15–38; n = 17).
- The **mean gestational age** at delivery was **38.3** ± 3.3 weeks (median 39, IQR 38.5–40; range 26–40; n = 19).
- The **mean birth weight was** 2982 ± 693 g (range 670–3980 g). The median was 3100 g (IQR 2800–3310 g). After exclusion of one extreme outlier (670 g), the mean birth weight was **3111 ± 420 g**, with a median of 3100 g (IQR 2853–3340 g; range 2500–3980 g).



The correlation between gestational age at delivery and neonate birth weight



The correlation between neonate birth weight and mother age

The **mean maternal age** at delivery was **30.4** ± 5.6 years (range 22–40). Maternal age showed a non-significant negative correlation with birth weight ($r = -0.39$, $p = 0.10$) and gestational age at delivery ($r = -0.25$, $p = 0.30$).

These findings suggest a trend towards lower birth weight and slightly earlier delivery in older mothers, although not statistically significant in this cohort.

THE MAIN EVENTS RECORDED:

- 1 patient, aged 36 years, on VDZ, conceived twins via IVF. Prenatal testing revealed **trisomy 21** in one fetus, and the pregnancy was **electively terminated**. Two weeks after the procedure, **spontaneous preterm delivery occurred** at 26 weeks of gestation.
- In addition, 1 newborn was diagnosed with a patent foramen ovale; the mother had been treated with VDZ during pregnancy, while her disease remained in remission.
- Biologic therapy was initiated due to disease flare during 1 pregnancy, while 2 additional pregnancies occurred during active disease. 1 patient required methylprednisolone.

4 Conclusion

In this retrospective single-center analysis, women with IBD who conceived while on advanced therapy were overall well managed, with the majority maintaining disease remission throughout pregnancy. Most patients adhered to treatment recommendations. Pregnancy and neonatal outcomes were comparable to those reported in the general population, with no clinically significant deviations observed. However, the relatively small cohort size represents a limitation and introduces potential bias; larger studies will be required to confirm these findings.

Related literature
1 Torres J, et al. European Crohn's and Colitis Guidelines on Sexuality, Fertility, Pregnancy, and Lactation. J Crohns Colitis. 2023;17:1–27

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