Management and Outcomes of Pregnancy in Patients with Inflammatory Bowel Disease in joint Obstetric/IBD Clinic

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INTRODUCTION

Women with active IBD are at higher risk of miscarriage and pre-term delivery than the general population

In addition, women are often concerned about taking medication during pregnancy. There is increasing recognition regarding the importance of achieving remission prior to conception, maintaining remission during pregnancy and communicating that the majority medications are safe in pregnancy.

Fertility and fecundity is known to be decreased after surgery for Crohn's disease and colectomy with ileal pouch anal anastomosis for Ulcerative Colitis, with infertility rates of 26–48% compared with 12–15% for IBD patients without surgery

While an uneventful pregnancy and a healthy baby is the norm in women with IBD, managing these complex conditions in pregnancy can be challenging.

The purpose of our audit was to review management and outcomes for pregnant patients with Crohn's Disease (CD) and Ulcerative Colitis (UC) in a District General Hospital following the implementation of a joint IBD/Obstetric clinic.

The secondary aim was to identify areas for quality improvement.

METHODS

We identified patients with IBD booked for their maternity care at the Princess Royal Hospital, Telford between 22/2/15-16/7/16. Data was collected retrospectively via both paper notes and online electronic patient record.

IBD Data

- Diagnosis
- Medications used during pregnancy
- Previous surgical history

Obstetrics Data

- Method of conception
- Numbers of live births
- Numbers of miscarriage
- Terminations of pregnancy
- Birth weight
- Pre-term delivery
- Congenital abnormalities
- Maternal mortality

RESULTS

From our original sample size of 30 pregnant patients, 7 patients were excluded due to incomplete data, giving us a final sample of 23 women.

Of these 17 had a diagnosis of CD and 6 UC. In order to analyse our data, we split the patient cohort into those with Crohn's and those with UC.

Of our 17 patients diagnosed with Crohn's disease the age ranges for patients were 27-40 years old giving a mean age of 31.9 years.

Our cohort of patients with UC was only small and thus limited conclusions can be drawn; their age ranges were 17-41 years old giving a mean age of 29.5 years.

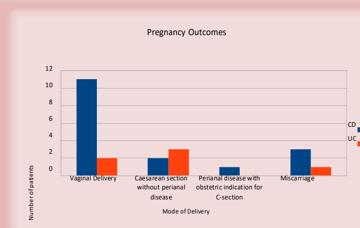
It is worth noting some of the patients with IBD may have been missed when we were identifying patients in our initial sample collection period . This could be due to GPs not including patients with an IBD diagnosis in the Past medical history in their summary sheets. The Antenatal care triage nurses are reliant on the GP summary sheets in order to identify and triage patients with underlying IBD who need to be seen in the joint IBD/Obstetric clinic.

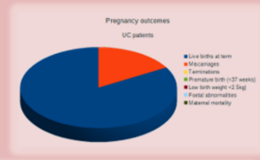
This is good practice to ensure continuity of care during the course of their pregnancy with early involvement from the IBD team to further the likelihood of better pregnancy outcomes

Mode of Delivery

In our patients with Crohn's disease the rate of Caesarean Section was low at 11.1%, with only three patients having caesarean section. In the UK population rates of caesarean section are approximately 25%.

In our UC cohort 50% of patients underwent a caesarean section while 33.3% had a normal vaginal delivery. This finding was more in keeping with previous research than our results for the CD cohort. Research consistently shows that IBD is an independent risk factor for caesarean section, with one study showing caesarean section in 32% or IBD patients versus 22% in the general population.





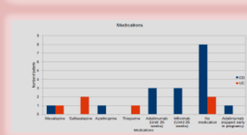
Treatment

Our CD patients were taking medications including Mesalazine, Azathioprine, Adalimumab, Infliximab and steroids. There were no adverse outcomes in any of the patients who took their medications during pregnancy. Anti-TNF therapy was stopped in both patients in the third trimester.

Our UC cohort patients were either on Mesalazine, Sulfasalazine or no medications. Use of Mesalazine in pregnancy is safe despite their presence in cord blood. Studies have shown no increased incidence of foetal abnormalities in offspring of mothers who took Mesalazine daily during pregnancy.

It was previously suggested that Sulfasalazine may be teratogenic because it crosses the placenta. However larger studies demonstrated that despite this characteristic, sulfasalazine did not cause foetal abnormalities. As is recommended for non-pregnant patients, it is essential that pregnant patients taking sulfasalazine also take folic acid because sulfasalazine inhibits folate synthesis. This is to reduce the risk of neural tube defects.

Following discussion with our IBD team on current practice at PRH Telford, it is worth noting that since 2016 the incidence of deliveries with patients on TFN alpha blockers has greatly increased and furthermore the majority have delivered without adverse outcomes.



	Surgery CD	Surgery UC
Previous surgery	7	1
Of Which Pouch Surgery	0	0

This decision must be made on an individual patient basis. Should the patent have complex disease the benefits of continuing treatment are likely to outweigh the risk. Studies have shown that babies born to mothers on Anti-TNF therapy do not have increased incidence of infection or increased mortality.

They should however avoid live vaccines for at least 6 months as there has been a case of disseminated BCG infection in a baby born to a mother on Infliximab following BCG vaccination.

Analysis

The outcomes in our patients were excellent on the whole, with no foetal abnormalities or low birth weight.

There was an increased incidence of miscarriage after booking visit compared with that expected in the general population.

The caesarean section rate in our CD patients was low at 17.6%, whereas it was 50% in the UC patients. The percentage of caesarean sections in the CD patients was less than the UK population average. The only patient who underwent caesarean section had perineal disease. The lower rate of caesarean section overall may be due early direct involvement of the IBD team particularly the IBD nurse, whom ensure continuity of care and are prepared to support natural vaginal delivery (NVD)

One patient delivered pre-term. This patient had stopped her Anti-TNF therapy early in pregnancy against the advice of her physician, due to concern regarding safety of the medication in pregnancy.

IDEAS FOR SERVICE IMPROVEMENT/COMMUNICATION

Clinic letters should include details such as duration of treatment, complexity of disease, details of all previous surgeries or frequency of flares. These details are imperative to management of patients under joint care (i.e. Gastroenterologists, obstetricians and GPs; for example a timeline of all the agents used in the patient's history could also allow for more efficient planning of pregnancy).

Discussions regarding fertility and the planning of pregnancy should occur with either the patient's Gastroenterologist or the IBD specialist nurses..

Discussions regarding medications and use during pregnancy need to be clearly documented in letters for the patient's GP.

Patients with previous pouch surgery should have careful discussions concerning NVD versus Caesarean section ideally in conjunction with their colorectal surgeon. These discussions should be documented in clinic letters. Patients who undergo vaginal delivery following pouch surgery have shown significantly higher incidence of anterior anal sphincter defects and lower quality of life scores.

All patients on Anti-TNF agents should have information given to them and documented in patient's letters on the importance of avoiding live vaccines until 6 months of age.

CONCLUSIONS

Overall in our cohort study the majority of outcomes in both the CD population and the UC population were good

This success can be contributed to the joint IBD/obstetrics clinic where the IBD specialist nurse is directly present and offers a liaison between the antenatal team and the IBD Consultant. An essential service to provide holistic care and further the chance patients will remain in remission during their pregnancy resulting in good pregnancy outcomes. This format allows better communication between the specialities especially in terms of medications and how they should be used during the course of the pregnancy.

We currently have a patient satisfaction survey in progress. Our patients report better patients satisfaction overall and feel assured that their disease activity is being monitored regularly with specialist input who are motivated for good outcomes in pregnancy.

In both planning conceptions and maintaining remission, it is vital that patients and their consultants understand that the majority of medications are safe to take during the conception period and during the first two trimesters of pregnancy with the exception of methotrexate and thalidomide.

Patients with IBD can be at increased risk of miscarriage as we have shown but previous data has suggested that this risk of foetal loss can be reduced and possibility avoided by maintenance of remission prior to conception, hence the importance of planning conception.

LIMITATIONS

The limitations of this study are mainly surrounding the small sample size. Aside from exclusions due to incomplete data there may have been a proportion of patients missing due to them not being on the list obtained from the antenatal department, as the ANC triage nurses are reliant on the information in GP summaries, and some GP Practices may have not documented clearly the patients have underlying IBD.

Furthermore due to retrospective method of data collection, it was difficult to assess the disease severity, activity and timing of flares from letters and electronic records. This information could have been particularly useful in analysing the incidence of miscarriage and the possible relation to disease activity.

We did not collect data regarding possible confounding variables I.e. smoking status, alcohol consumption, BMI, co-morbidities, nutritional status and socioeconomic status. This could be a potential area on which to expand our audit.

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