**Introduction**

Crohn’s disease (CD) is a Th1/Th17 driven disease in which TNF-α and INF-γ play important roles. Anti-TNF-α drugs are used in moderate-severe CD to induce and maintain remission. Mucosal healing is an aim of therapy. MicroRNAs are noncoding RNAs which control translation of mRNA. MiR-31, miR-146a and miR-155 are involved in the regulation of immune responses and are deregulated in CD. Aim of this study is to evaluate the impact of medical treatment on microRNA expression in CD and to investigate microRNAs as biomarkers in CD.

**Methods**

37 patients with colonic CD undergoing colonoscopy were recruited. A partial Simple Endoscopic Score for CD (SES–CD) was assessed. Sigmoid biopsies were taken from patients in remission (SES–CD=0) and 18 patients with active sigmoid CD (SES–CD≥1). Remission (R) was defined as mucosal healing (SES–CD=0) and treatment failure (F) as an SES–CD≥1 in the left colon. MicroRNA (miR-31, miR-146a and miR-155) and mRNA expression (TNF-α, INF-γ) were evaluated by qPCR. Sub-analysis compared treatment naïve patients (6 inactive/active) to patients on thiopurines (TP) (R=5/F=3) and anti-TNF-α therapy (R=6/F=7).

**Results**

miR-31, miR-146a and miR-155 were significantly up-regulated as were TNF-α and INF-γ in active sigmoid CD compared to patients in remission. Patients on TP compared to treatment naïve patients showed significant down-regulation of TNF-α and INF-γ in remission, compared to treatment naïve patients with active CD. MicroRNA levels in TP failure were interstingly lower compared to patients in remission. In contrast, microRNA levels in the anti-TNF-α group in therapy failure were significantly elevated compared to active treatment naïve patients, behaving opposite to patients on TP. MicroRNA expression in remission showed levels similar to treatment naïve patients in remission. While TNF-α and INF-γ returned to base levels in remission on anti-TNF-α drugs, significantly lower compared to active treatment naïve CD, in therapy failure TNF-α remained elevated and INF-γ was significantly raised.

**Conclusion**

Our data reveals a clear up-regulation of miR-31, miR-146 and miR-155 as well as of TNF-α and INF-γ in active colonic CD. TP and anti-TNF-α drugs significantly alter the expression of microRNAs miR-31, miR-146a and miR-155 compared to treatment naïve patients behaving in an opposing manner. MicroRNAs remain significantly elevated in patients with sigmoid CD failing to respond to anti-TNF-α treatment. MicroRNAs expression profiles may have a role as biomarkers in predicting treatment failure in CD.

**Disclosure of Interest**

None Declared.

---

**REFERENCES**


**Disclosure of Interest**

None Declared.
Methods Patients were retrospectively identified at two hospitals in the UK and in Australia, using our local IBD databases. All pregnancies of co-therapy patients were included. TPMT activity and pre-pregnancy weight were used to calculate thiopurine dosing. Data regarding pregnancy and fetal outcomes were collected from patient notes.

Results Eleven females on co-therapy became pregnant, totalling twelve pregnancies with eight live births (Table 1) and four ongoing pregnancies. There were no reported terminations, miscarriages or spontaneous pre-term deliveries (<37 weeks). Four patients gave birth by spontaneous vaginal delivery (SVD); four by Cesarean section (C-section). There were no low birth weight (<2.5kg) babies. The APGAR scores of all babies were normal and no congenital malformations were identified either on fetal ultrasound scans or on neonate checks. The median duration of follow-up of babies was 6.5 months with no indication of morbidity.

Conclusion All twelve cases were treated successfully with co-therapy without any adverse pregnancy related events or adverse fetal outcomes. Intrauterine exposure of the fetus to thiopurine metabolites is not greater with combination therapy compared with thiopurine monotherapy. There are only two reports of congenital malformations with maternal allopurinol use. The case for an association based on two cases is weak, moreover a negative publication bias with respects to successful maternal allopurinol use is suspected. Our study provides support for clinicians and patients wishing to continue thiopurine-allopurinol co-therapy during pregnancy.

Disclosure of Interest None Declared.


Introduction We have previously demonstrated concerningly high 3-year mortality following hospitalisation with ulcerative colitis (UC) between 1998 and 2000 in Scotland.1 We have extended these studies by examining 3-year mortality following hospitalisation with UC in Scotland between 2007–2009, providing an opportunity for comparison with our earlier results.


Methods The Scottish Morbidity Records and linked datasets were used to assess 3-year crude mortality, standardised mortality ratio (SMR) and multivariate analyses of factors associated with 3-year mortality. The 3-year mortality was determined after four admission types: surgery-elective or emergency; medical-elective or emergency. Age-standardised mortality rates (ASR) were used to compare mortality rates between periods.

Results The admission rate with UC increased from 10.6 per 100,000 of the Scottish population per year in Period 1 to 11.6 in Period 2 (p = 0.046). Among those admitted with UC, the proportion aged <30yrs increased (p = 0.009). Crude and adjusted 3-year mortality fell between time periods (Crude 12.2% [Period 1] to 8.3% [Period 2]), adjusted OR 0.59, CI 0.42 to 0.81, p = 0.04). Following emergency medical admission, 3-year mortality was reduced in Period 2 (OR 0.58, p = 0.003). Within the >65 yrs age group crude 3-year mortality fell (38.8% to 28.7%, p = 0.02). The overall SMR in period 1 was 3.04 and 2.96 in Period 2.

Directly age standardised mortality decreased from 373 (CI 309–437) to 264 (CI 212–316) per 10,000 person years. On multivariate analysis, older age and co-morbid remained associated with 3-year mortality in Period 2.

Conclusion Although the mortality associated with admission remains high at 3 years, crude and adjusted rates suggest significant reductions over the last decade.

REFERENCE
1 Nicholls RJ, Clark DN, Kelso L, et al. Nationwide linkage analysis in Scotland implicates age as the critical overall determinant of mortality in ulcerative colitis. Aliment Pharmacol Ther 2010;31:1310–21

Disclosure of Interest N. Venthnam: None Declared, N. Kennedy: None Declared, A. Duffy: None Declared, D. Clark: None Declared, A. Crowe: None Declared, A. Knight: None Declared, J. Nicholls Grant/research support from: A grant was obtained from AbbVie Ltd to be administered by the North West London Hospital Trust (NWLHT) on behalf of Prof Nicholls, to allow funding of ISD and Corvus Communications for their work on the project. In the context of the work presented in this manuscript and in consideration of BMJ guidance, none of the authors have any competing or other conflict of interest, J. Satangi: None Declared.

PTU-108 CROHN’S DISEASE AND ANOGENITAL GRANULOMATOSIS PRESENTING WITH GENITAL OEDEMA

Introduction We have previously demonstrated concerningly high 3-year mortality following hospitalisation with ulcerative colitis (UC) between 1998 and 2000 in Scotland.1 We have extended these studies by examining 3-year mortality following hospitalisation with UC in Scotland between 2007–2009, providing an opportunity for comparison with our earlier results.

PTU-106 Successful Pregnancies With Thiopurine-allopurinol Co-therapy For Inflammatory Bowel Disease

M Sheikh, C Nelson-Piercy, J Stenner, G Mackenzie, J Duley, T Florin and A Ansari

*Gut* 2014 63: A85-A86
doi: 10.1136/gutjnl-2014-307263.180

Updated information and services can be found at:
http://gut.bmj.com/content/63/Suppl_1/A85.2

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/