**BACKGROUND**

Intravenous steroids remain the standard first line treatment for patients with acute ulcerative colitis (UC). However, 30% of patients fail to respond and require second line therapies and/or surgery. The purpose of this study was to determine whether day 1 parameters could identify a group at high risk of failure of first line therapies.

**METHODS**

- All admissions for acute UC (ICD-10 K51) to hospitals within NHS Lothian (4 sites) from 1st November 2015 to 31st October 2016 were obtained from the regional coding department.
- Inclusion was limited to patients with UC as the primary reason for admission.
- Case record review confirmed diagnosis and clinical data were collected.
- Response to steroids was defined as discharge from hospital with no further acute medical or surgical treatment.
- The following parameters were recorded up to the first 10 days post admission: haemoglobin, platelet count, CRP, albumin, stool frequency, faecal calprotectin and abdominal x-ray results.
- Each patient was later attributed a score based on CRP (<50 mg/dL = 0; >50 mg/dL = 1), albumin (>30 g/L = 0; <30 g/L = 1) and platelets (<450x10^9/L = 0; >450x10^9/L = 1).

**RESULTS**

- From 1st November 2015 to 31st October 2016 61 admissions with acute UC were identified.
- 37 (60%) of which responded to steroids, 24 (40%) patients were non-responders.
- 3 (12.5%) non-responders received infliximab as second line therapy, 1 (4.2%) adalimumab and 20 (83.3%) ciclosporin.
- 11 (45.8%) of the non-responders required surgery, 100% of whom had been previously treated with ciclosporin.
- On univariate analysis, the albumin, platelet count and CRP differed significantly between responders and non-responders (p<0.05).
- But on multivariate analysis only CRP and albumin were significant.
- No difference was seen for haemoglobin and stool frequency.
- 88.9% of patients with concurrent hypoalbuminaemia, high CRP and high platelets (score = 3) were non-responders.

**CONCLUSION**

82.4% of patients with a score of 2 or more will fail first line medical therapy. The combination of these readily available parameters identifies a high risk population who may benefit from earlier second line medical or surgical intervention.