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Immune responses to stool of patients with inflammatory bowel diseases treated with anti-TNF therapies

Submission date 09/03/2022	**Recruitment status** No longer recruiting	[X] Prospectively registered [X] Protocol [_] Statistical analysis plan [_] Results [_] Individual participant data [_] Record updated in last year
Registration date 18/03/2022	**Overall study status** Completed	
Last Edited 18/03/2022	**Condition category** Digestive System	

Plain English summary of protocol

Background and study aims
Inflammatory bowel disease (IBD) is a term mainly used to describe 2 conditions: ulcerative colitis and Crohn's disease. Ulcerative colitis and Crohn's disease are long-term conditions that involve inflammation of the gut. Ulcerative colitis only affects the colon (large intestine). Crohn's disease can affect any part of the digestive system, from the mouth to the bottom (anus). Anti-TNF therapies (TNF inhibitors are drugs that help stop inflammation) remain the mainstay biologic treatment for inflammatory bowel disease (IBD) patients. These are hugely costly and the efficacy of any one of these agents are still limited with side-effects that can be potentially severe and life-threatening. Between 20–40% of patients do not respond to anti-TNF therapies and a further 25% of patients lose response over the first year of treatment. Predictors of efficacy for anti-TNF treatment would be extremely useful in clinical practice in order to optimise treatments and to minimise side-effects and costs. There is an urgent need to personalise therapeutic choices to avoid unnecessary delays in treatment benefit, avoidance of adverse effects and to reduce costs.

Recent data suggest that the microbiota may offer a non-invasive predictive tool to predict response to anti-TNF therapy as well as response to other biologic therapies. Macrophage (immune cell) expression of inflammatory regulators that respond to microbial signalling were also recently identified as potential predictors of anti-TNF therapy response and that an altered microbiome composition may influence expression of macrophage inflammatory regulator expression and subsequently anti-TNF responsiveness.

We aim to conduct this pilot study to assess differences of macrophage characteristics when co-cultured with faecal supernatants from anti-TNF responders and non-responders with Crohn's disease and Ulcerative colitis.

Who can participate?
Inflammatory bowel disease patients initiating anti-TNF therapy

What does the study involve?
Blood samples, stool samples, and biopsies will be taken in addition for research purposes where patients are undergoing interventions as part of routine clinical care.

What are the possible benefits and risks of participating?
None

Where is the study run from?
West Hertfordshire Teaching Hospitals NHS Trust (UK)

When is the study starting and how long is it expected to run for?
October 2021 to July 2024

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Dr Jonathan Landy, jonathan.landy@nhs.net

Contact information

Type(s)
Principal investigator

Contact name
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Additional identifiers

Integrated Research Application System (IRAS)
264405

Study information

Scientific Title
Study of monocyte/macrophage responses to faecal supernatants of anti-TNF responsive and non-responsive IBD patients.

Study objectives
Faecal supernatants from inflammatory bowel disease patients that are subsequently responsive to anti-TNF therapy will exert a distinct phenotype and function of monocytes /macrophages when co-cultured.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Not provided at time of registration

Study design
Single centre longitudinal observational cohort study

Primary study design
Observational

Study type(s)
Diagnostic

Health condition(s) or problem(s) studied
Inflammatory bowel disease

Interventions
Blood samples, stool samples, and biopsies will be taken in addition for research purposes where patients are undergoing interventions as part of routine clinical care.

Intervention Type
Other

Primary outcome(s)
Phenotype of monocyte/macrophages and monocyte/macrophage response to faecal supernatant measured using:
1. Blood and stool samples collected at baseline and at weeks 14, 30 and 52 or at the point of loss of response after initiating anti-TNF therapy.
2. Where patients undergo colonoscopy prior to or within 12 months after initiating anti-TNF therapy, colonic biopsies will be taken

Key secondary outcome(s))
Clinical evaluation of patients records and bloods including CRP, Albumin and haemoglobin and stool tests including faecal calprotectin will be taken at baseline and at weeks 14, 30 and 52 or at the point of loss of response after initiating anti-TNF therapy.

Completion date
01/07/2024

Eligibility

Key inclusion criteria

Inflammatory bowel disease patients initiating anti-TNF therapy

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
1. Crohn’s disease without ileal or colonic involvement
2. Ulcerative proctitis
3. Pregnancy

Date of first enrolment
01/08/2022

Date of final enrolment
01/08/2023

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Watford General Hospital
West Hertfordshire Teaching Hospitals NHS Trust
Vicarage Road
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WD18 0HB

Sponsor information

Organisation
West Hertfordshire Hospitals NHS Trust

ROR
https://ror.org/03e4g1593

Funder(s)

Funder type
Other

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available. Patient data will be stored on hospital computers and password protected at all times. All data will be link anonymised and held securely. No individuals will be identified in published data. De-identified data will be analysed by the research investigators.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file	version 2	29/12/2021	14/03/2022	No	No