LETTER TO THE EDITOR

Infliximab is safe and induces sustained remission with complete mucosal healing in Crohn's disease in a patient with pan resistant pseudomonas cystic fibrosis: A case report

Dear Sir,

We report the case of a 31 year old Caucasian male with cystic fibrosis (CF), homozygote for ΔF508 mutation. Sputum analysis showed colonisation with a pan-resistant Pseudomonas aeruginosa, sensitive only to tobramycin and colistin. The patient had recurrent episodes of perianal sepsis, diarrhoea and weight loss over 9 months. He underwent EUA and insertion of a draining seton in March 2012. Subsequent colonoscopy showed appearances consistent with ileocolic Crohn's disease (CD), with moderate proctitis associated with extensive segmental colitis and ileitis (Fig. 1A and B). Histology confirmed CD. Other immune deficiencies were excluded at diagnosis.

Standard induction infliximab (IFX) was commenced and there was a significant symptomatic improvement. Harvey Bradshaw Index (HBI) reduced from 10 to 2. Weight increased from 65 kg to 79 kg (22.5% increase) at 6 months. Bloods prior to induction revealed a microcytic anaemia (Hb 10.0 g/dL, MCV 77 fL), albumin 30 g/L and raised CRP at 68.9 mg/L. Within 3 months, anaemia had resolved, CRP had normalised and albumin was 36. Repeat colonoscopy was performed in October 2013 (Fig. 1C and D) and showed complete mucosal healing in colon and TI.

Pulmonary function tests (PFTs) performed during IFX therapy showed stable lung function and no infective episodes have occurred since commencing IFX treatment. IFX was escalated from eight- to six-weekly in April 2013 due to a slight increase in perianal symptoms but at follow-up (f/u), 2 years from commencing IFX, the patient was in symptomatic remission.

We present the case of sustained symptomatic remission with complete endoscopic mucosal healing in CD successfully treated with IFX, in the setting of CF. There is only one case report evaluating the safety of IFX in the setting of CF associated with CD. Importantly, our patient had no adverse events from use of IFX, and he did not have any respiratory tract infections or hospital admissions during f/u.

The ΔF508 mutation is found in roughly 50% of patients with CF and homozygotes for ΔF508 have more severe disease, and lower life-expectancy. Patients with CF are predisposed to increased risk of chronic colonisation with microbes such as Pseudomonas aeruginosa, as in our case, and multi-drug resistant organisms can become difficult to manage.

CF patients suffer from GI manifestations, with an increased incidence of IBD. There is an association between TNFα polymorphisms and severity of CF lung disease, with high concentrations of TNFα in the bronchoalveolar lavage (BAL) of CF patients.

Figure 1 From top left clockwise A) sigmoid and B) rectum pre-IFX. C) Rectum and D) colon post-IFX.
A rationale for use of anti-TNF in CF exists in the literature but caution is needed when using powerful immunosuppressive agents in these compromised individuals. We highlight our experience of maintenance IFX use in a CF patient chronically colonised with pan-resistant *Pseudomonas aeruginosa* suggesting that it can be used safely and remission with mucosal healing can be achieved.

**Conflicts of interest**

There are no conflicts of interest associated with any of the authors of the attached manuscript.

**References**


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