Table 1 Outcome of patients in the study

Genotype	SVR (ITT)	SVR rate (%)	Treatment completed (outcome known)	SVR (treatment completed)	SVR rate (%)	SVR excluding DTT (ITT)	SVR rate (%)
G1 (n=92)	26/92	28	66	24/66	36	21/64	33
G2 (n=23)	18/23	78	17	15/17	88	11/13	85
G3 (n=118)	69/118	59	92	66/92	72	51/75	68
Other (n=10)	9/10	90	8	7/8	88	3/3	100
Total (n=243)	122/243	50	183	112/183	61	86/155	65

Ten patients were genotype 4, 5, or 6, or of mixed genotypes. Of 190/243 patients for whom fibrosis stage was known before treatment, 64 (26%) had established cirrhosis.

In our study 186/243 (77%) patients completed the proposed treatment duration. Outcome is known for 183 patients (table 1). On ITT analysis, SVR rates of 28% were observed for genotype 1, 78% for genotype 2, 59% for genotype 3, and 90% for other genotypes. For patients who completed the proposed duration of treatment, response rates were 36% for genotype 1, 88% for genotype 2, 72% for genotype 3, and 88% for other genotypes. Of particular interest were the 57 (23%) patients who were unable to complete the duration of treatment that was proposed at baseline. This is a higher rate of attrition than in published clinical trials (for example, 14% in Manns and colleagues¹). The most frequent reasons for withdrawal were depression or an inability to tolerate side effects. Treatment cessation for neutropenia, anaemia, or thrombocytopenia was infrequent, although many patients required dose reduction during treatment. Inclusion/exclusion criteria adopted by Manns and colleagues¹ identified 88/243 (36%) patients as DTT. When DTT patients were excluded from the analysis, the SVR achieved was superior to the ITT SVR results—33% for genotype 1, 85% for genotype 2, and 68% for genotype 3.

On ITT analysis, the results of HCV treatment at our centre appear significantly worse than those in the published literature. This appears to be true for patients with genotype 1 infection in particular. In part, we believe that inferior results reflect inclusion in our cohort of patients with more DTT disease. These patients have more advanced liver disease, with more imminent serious clinical events, and a more urgent need for viral eradication. Despite predictably inferior response rates, they are worthy recipients of antiviral treatment. However, they are more often intolerant of treatment, need more frequent dose adjustment, and are less likely to complete the course of treatment. Analysis of SVR after exclusion of patients with DTT infection showed improved response rates for all genotypes.

A relatively high proportion of our cohort failed to complete the planned course of treatment. Patients with genotype 2/3 infection were more likely to complete the planned duration of therapy than patients with genotype 1. This probably reflects greater difficulty in tolerating the demands of 12 months of treatment for genotype 1 infection compared with six months for genotypes 2/3. Psychological intolerance, mainly depression, appeared quite frequent. A more intensive pretreatment evaluation of psychological status may help to identify individuals whose ability to cope with treatment would be enhanced by antidepressant

therapy and/or psychological support. Finally, it is essential that treatment centres know their own results which should be shared with patients at the time of pretreatment counselling.

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doi: 10.1136/gut.2006.094292

Conflict of interest: None declared.

Conflict of interest declared (the declaration can be viewed on the Gut web site at <http://www.gutjnl.com/supplemental>)

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Leukotriene receptor antagonists as potential steroid sparing agents in a patient with serosal eosinophilic gastroenteritis

Eosinophilic gastroenteritis is a heterogeneous and uncommon disorder characterised by eosinophilic inflammation of the gastrointestinal tissues. The location and depth of infiltration determine its various manifestations and later serve as the basis for its classification as mucosal, muscular, and

serosal forms of eosinophilic gastroenteritis. The gold standard for diagnosis is an endoscopic biopsy showing prominent tissue eosinophilia. Gastrointestinal mucosal involvement causes malabsorption, protein losing enteropathy, and diarrhoea. Infiltration of the muscular layer of the bowel wall may cause gastric outlet or small bowel obstruction. Serosal involvement causes exudative ascites rich in eosinophils; this is the least common form and is usually diagnosed by laparoscopic examination and biopsy of the whole intestinal wall.^{1 2}

We present the case of an 18 year old male student with a history of allergic rhinitis presenting with abdominal pain, nausea, and low grade fever, which started a few weeks before his admission. Medical history was unremarkable for any other serious disease. Laboratory findings showed leucocytosis with a high percentage of eosinophils (81%); skin prick testing showed sensitivity to Dermatophagoides pteronyssinus and ragweed pollen; total immunoglobulin E in serum was three times the normal level (311 kI/l); and a bone marrow aspiration specimen showed increased numbers of mostly mature eosinophils (62%) in the differential cell count. These findings suggested an atopic constitution.

Endoscopic examination of the whole gastrointestinal tract, histological analysis, and abdominal computed tomography showed no pathological features. Sonographic abnormalities were discovered mostly in the right lower quadrant of the abdomen where a small amount of ascites was found together with nodular deposits on the parietal peritoneum in the same region, indicating peritoneal inflammation (fig 1). Cytological examination of ascites revealed numerous eosinophils (differential count 91% eosinophils) and a few mesothelial cells in the highly cellular cytospin preparation. Sonographic visualisation of nodular peritoneal deposits associated with eosinophilic ascites, peripheral blood eosinophilia, and atopic constitution permitted a diagnosis of the serosal form of eosinophilic gastroenteritis.

Two weeks of oral prednisolone 20 mg/day brought relief to the patient's symptoms, with normalisation of laboratory parameters and sonographic findings. Two months later the patient suffered a relapse with the same abdominal symptoms. Again, the same diagnostic procedure was done, and therapy with oral prednisolone was effective. During the next relapse of the serosal form of eosinophilic enteritis, which was accompanied by a relapse of rhinitic symptoms, we introduced leukotriene receptor antagonists (montelukast 10 mg/day) with the aim of reducing corticosteroid therapy. After four weeks of this therapy the patient achieved complete clinical and laboratory remission, which

Figure 1 Initial sonographic examination. A peritoneal nodule (4 mm, arrow) in the region of the terminal ileum and ascites are typical of the serosal form of eosinophilic gastroenteritis.

continued for the next six months of leukotriene inhibitor therapy at the same dose.

We conclude that leukotriene receptor antagonists may be useful as steroid sparing agents in patients with the serosal form of eosinophilic gastroenteritis. Eosinophils are potent sources of leukotrienes, including leukotriene C4 and leukotriene D4, molecules known to induce eosinophil chemotaxis, smooth muscle contraction, mucous secretion, and mucosal oedema. Many factors may play a role in directing eosinophils to a site of inflammation. These data should challenge our thinking about the treatment of eosinophilic gastrointestinal diseases with new antileukotriene agents, such as leukotriene inhibitors, that provide a more targeted approach to eosinophil derived products.³

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doi: 10.1136/gut.2006.099465

Conflict of interest: None declared.

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Prevention of abortion by ciclosporin treatment of fulminant ulcerative colitis during pregnancy

Ciclosporin (CsA) is an established treatment in severe, intravenous corticosteroid resistant ulcerative colitis (UC). Although one third of UC patients relapse during pregnancy, experience with CsA use during this period is limited to a few case reports.¹ Most of the available data on CsA administration and pregnancy outcome have been obtained from the transplantation literature.² We read the letter of Jayaprakash and colleagues (*Gut* 2004;**53**:1386–7) who described the case of a patient with fulminant corticosteroid resistant distal UC successfully treated with CyA and delivering a healthy baby. Herein we report the dramatic case of a 21 year old

primigravida with a diagnosis of UC (in April 2000) who experienced a fulminant flare at the end of her first trimester despite immunosuppressive treatment and whose pregnancy could only be preserved by intravenous CsA therapy.

At time of conception in June 2003 the patient was in stable clinical remission, receiving 40 mg/day of thioguanine, 2 g/day of mesalamine, and 50 mg/day of sertraline because of chronic active disease resistant to azathioprine. In the 13th gestational week the patient was admitted to hospital because of a fulminant relapse of UC despite 50 mg of oral steroids which had been self administered for one week. At admission, laboratory tests showed a C reactive protein level of 9.36 mg/dl and a haemoglobin level of 8.9 g/dl. Thioguanine was discontinued and after the patient had failed to respond to intravenous prednisolone at a dose of 75 mg for nine days, abortion was discussed but declined by the patient. Therefore, intravenous CsA at a dosage of 2 mg/kg/day was started. Careful monitoring of creatinine and serum CsA levels leading to levels of 200–300 ng/ml was done and repeated sonography of the fetus was performed. Erythrocyte concentrates were required due to progressive anaemia. Induction of response was delayed resulting in an unusual long term CsA treatment period of three weeks. The symptoms of UC improved, CyA was switched to oral administration (100 mg twice daily), and the patient was discharged after five weeks, although complete remission was never achieved.

Apart from the occurrence of hypertrichosis, CsA was well tolerated by the patient. In the 29th gestational week, a caesarean section was necessary because of premature rupture of fetal membranes and growth retardation. The patient delivered a female baby with a birth weight of 893 g and a length of 35 cm (APGAR score 9/10/10). Typical problems of preterm births such as respiratory distress syndrome, acute enterocolitis necroticans, sepsis, and anaemia were successfully handled at the ICU and subsequently the girl had normal growth and development. Echocardiography detected a peripheral pulmonary artery stenosis and a small ASD II which regressed and spontaneously occluded after 10 months of birth, respectively. Two small haemangiomas on the head and back were also found but became smaller in size. After discontinuation of CsA postpartum, symptoms of UC deteriorated in the mother, beyond control by conservative measures. Colectomy with ileostomy was performed in June 2004. Currently the patient is pregnant again, and mother and fetus are in good health.

While standard medication such as 5-ASA, azathioprine/6-mercaptopurine, and corticosteroids are considered to be safe in the treatment of UC during pregnancy, administration of CsA is controversial. Intravenous CsA considerably improved symptoms of UC in our patient without major toxicity. Premature delivery with all of its consequences could be related to deterioration of UC or CsA therapy, as both have been reported in the literature, whereas the role of thioguanine still remains unclear. However, as a result of CsA treatment, the pregnancy was prolonged and the fetus reached a gestational age which allowed an alive delivery. Acute colectomy, which is associated with tremendous maternal and fetal risk, was avoided.³ Based on this positive