according to the criteria set up by Holmquist *et al.*[6] Liver function tests showed signs of cholestasis in six patients with ulcerative colitis. Further investigation with ERCP and liver biopsy verified primary sclerosing cholangitis in three children with ulcerative colitis, two of whom had a newly diagnosed mild pancolitis and one had had an almost symptomless colitis for six years and impaired liver function tests for the last two years. The remaining three children with cholestatic liver function tests have, for various reasons, not yet been investigated with ERCP.

Thus of 14 children at our department with ulcerative colitis at least three and probably six have primary sclerosing cholangitis. This indicates a high prevalence of primary sclerosing cholangitis in childhood ulcerative colitis and emphasises the need for regular testing of liver function in children with inflammatory bowel disease, even those with a clinically mild disease.

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Guidelines for ethical conduct of medical research in children

EDITOR,—In the research report and commentaries on venepuncture several references were made to the BPA *Guidelines for the Ethical Conduct of Medical Research Involving Children* 1992.[1] The guidelines were quoted as classifying venepuncture as low, not minimal, risk. However, the guidelines actually say: 'Many children fear needles and *for them* low rather than minimal risks are often incurred by injections and venepuncture' (emphasis added).

Although risk probability has objective measures, the severity of any harms which are risked is partly a subjective estimation. The guidelines allow for possible differences in risk assessment by the doctor, parents and child, and among various groups of children. Clear explanations, expert phlebotomists, and the offer of EMLA cream can all help each child to decide whether the risks associated with venepuncture are worth undertaking. The research reported in this journal suggests that most healthy children are willing to consent to a single research venepuncture.

However, a minority of children deeply fears needles. In a recent multicentre study we interviewed 120 young people aged 8 to 15 years having orthopaedic surgery.[2] They have chronic conditions and on average have had four previous operations. They were asked what they (a) most and (b) least looked forward to about being in hospital. In answer to question (b) 59 said 'needles', 34 gave two or more examples which mainly included 'needles' and 'having stitches taken out', 14 said 'nothing particular', and 13 said 'the operation'. They were all having major surgery, nearly half were waiting for spinal surgery; 15 year olds were as likely as 8 year olds to object to needles.

'In all but the most life threatening circumstances it amounts to an abuse of a child's rights as members of society to disregard a refusal to consent to treatment if the child seems to have made a fully informed and considered decision.'[3] How much more does this standard apply to children taking part in research which is not of direct benefit to them?

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Use of enteric coated prednisolone in Crohn's disease

EDITOR,—A new patient, aged 13 years, presented to our paediatric inflammatory bowel clinic with abdominal pain, weight loss, and bloody diarrhoea. Full investigation including barium meal and follow through, colonoscopy and biopsy demonstrated active Crohn's disease of the terminal ileum and colon. He was treated with prednisolone initially at 40 mg/day with good relief of his symptoms.

As an outpatient he was represcribed enteric coated prednisolone by his general practitioner instead of the non-enteric type prescribed in our clinic. On the same dose as before his symptoms (abdominal pain and diarrhoea) recurred. Non-enteric coated prednisolone was represcribed and he improved.

This is not an isolated occurrence in our unit. We frequently hear from parents that their children have deteriorated with a switch from non-enteric coated to enteric coated prednisolone.

The pharmacokinetics of enteric coated and non-enteric coated prednisolone have been studied in normal subjects. The bioavailability is similar but peak plasma concentrations are reached after approximately two hours using non-enteric coated formulations and at around four hours using enteric coated ones.[1 2] The absorption of drugs in Crohn's disease is known to be erratic associated with local inflammation, rapid transit time, and diarrhoea[3] and enteric coated prednisolone is likely to be less well absorbed. There are other reports in the literature of adults with Crohn's disease who have failed to respond to enteric coated prednisolone and responded to the non-enteric coated formulation.[4] A recent review suggested that the advantages of enteric coated prednisolone in the prevention of duodenal ulceration are only theoretical.[5]

We advocate the use of non-enteric coated prednisolone in the treatment of Crohn's disease and suggest that in any condition where there is a rapid transit time or diarrhoea enteric coated prednisolone should be used with caution.

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Symptoms of diabetes insipidus

EDITOR,—It is well recognised that in children presenting with symptoms of diabetes insipidus the investigations should include a brain scan to exclude a hypothalamic tumour. It has been our policy to perform a second brain scan six months later if the first is negative to ensure that a small tumour has not been missed. We have recently seen a child where this strategy failed.

The child, a girl aged 9 years, presented with a short history of enuresis and was found to have diabetes insipidus. She was also of short stature and investigations confirmed that she had not only diabetes insipidus but growth hormone deficiency. There was a hypothalamic thyrotrophin stimulating hormone response to thyroid releasing hormone but she was euthyroid and cortisol concentrations were normal. Two brain scans, the second with contrast and performed six months later, were normal. She was started on desmopressin and growth hormone with excellent response. Four years later she presented with vague symptoms of tearfulness, lethargy, and tiredness after a series of winter respiratory illnesses. Examination at that time was normal, her growth was excellent and it was thought that her symptoms were related to a variety of illnesses during the winter months in association with family upheaval. She was referred to a child psychiatrist. Within a few weeks, however, she had deteriorated and was found to have a decrease in her visual fields though there were no hard neurological signs. Magnetic resonance imaging (MRI) confirmed the presence of a hypothalamic tumour which proved to be a dysgerminoma.

This tumour must have been present when the child was first seen and it is possible that MRI then rather than computed tomography may have confirmed its presence. There must be a number of children nationally with diabetes insipidus who have had computed tomography only and we would recommend that they have MRI as soon as possible. We

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