10 courses) and 81% (13 out of 16 courses) respectively. There were no side effects. Oral prednisolone was initially less effective (70% response) but roughly the same proportion of patients (85% or 16 out of 20 courses) reacted within three to four weeks, the delay being due to a slow response in three patients. The table shows the mean platelet counts in the three patient groups for those patients who reacted to treatment. The effect of intravenous corticosteroids was even faster than that of intravenous gammaglobulin, although the difference was not statistically significant.

Platelet count ($\times 10^9/l$; mean (SD)) before and during treatment and with maintenance treatment

Drug	Day				
	0	3	5	7	10
Prednisolone	13 (14)	56 (31)	100 (42)	140 (64)	147 (47)
Methylprednisolone	20 (17)	100 (46)	146 (51)	158 (68)	120 (54)
Gammaglobulin	23 (13)	69 (74)	136 (44)	177 (149)	133 (51)

Comment

Our study shows that high dose intravenous methylprednisolone is as effective as intravenous gammaglobulin in treating autoimmune thrombocytopenia; hence it may be considered a less expensive alternative. The effect of intravenous corticosteroids was transient in all our patients, as was that of intravenous gammaglobulin.⁵ Maintenance treatment with a low oral dose of prednisolone (20-40 mg/day) was necessary to ensure a more lasting effect. In the long term oral prednisolone was as effective as intravenously administered corticosteroids. Hence this treatment is indicated only in patients with a severe bleeding tendency. It may also be used to prepare these patients for surgery.

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Antenatal factors associated with obstruction of the gastrointestinal tract by meconium

Obstruction of the gastrointestinal tract by meconium in the neonate ranges in severity from the inspissated meconium syndrome, which may require an operation, to the meconium plug syndrome, which is a failure to pass meconium within the first 24 hours of life and which resolves spontaneously.¹ To identify the factors associated with the condition we examined the antenatal records of eight successive babies who were diagnosed as having meconium obstruction in the neonatal period.

Patients and results

Obstruction of the gastrointestinal tract by meconium was diagnosed in only eight of 400 infants treated in the neonatal intensive care unit at this hospital over

12 months. All eight infants (six girls and two boys) had birth weights that were below the third centile. The mothers had been referred to this hospital at 24-30 weeks' gestation for assessment of severe intrauterine growth retardation. The fetuses were physically and chromosomally normal; screens for toxoplasma, rubella, cytomegalovirus, herpes, and autoantibodies gave negative results. Abdominal circumferences were below the fifth centile of the normal range for gestation. Each fetus had a hyperechogenic bowel, defined as a mass with a similar echogenicity to the skeleton in the lower half of the abdomen between the liver and the bladder; each fetus also had oligohydramnios, as defined previously.² Doppler ultrasonography showed that the resistance index of the uteroplacental circulation was greater than the 95th centile of the normal range and that the mean velocity of blood in the fetal thoracic aorta was less than the fifth centile; end diastolic frequencies in the umbilical artery were absent.³ Fetal oxygen tension was less than the fifth centile of the normal range for gestation.⁴ The table shows the indications for delivery, the modes of delivery, and the birth weights.

Data on delivery of fetuses with hyperechogenic bowel

Case No	Gestation at delivery (weeks)	Indication for delivery	Mode of delivery	Birth weight (g)
1	30	Hypertension induced by pregnancy	Caesarean section	950
2	35	Premature labour	Caesarean section	960
3	27	Abnormal biophysical profile	Caesarean section	540
4	28	Abnormal biophysical profile	Caesarean section	520
5	28	Abnormal biophysical profile	Caesarean section	680
6	27	Abnormal biophysical profile	Caesarean section	540
7	34	Hypertension induced by pregnancy	Caesarean section	1700
8	30	Premature labour	Caesarean section	450

None of the babies passed meconium in the first 24 hours of life. In six babies the abdomen became progressively distended. This resolved in four (cases 1-4) after spontaneous passage of a meconium plug two to four days after birth. In two babies (cases 5 and 6) the distension did not respond to repeated saline enemas and the obstruction was relieved only after an ileostomy was fashioned. In case 5 recovery was uncomplicated and the ileostomy was closed on day 40, but in case 6 the baby died at the age of three months from septicaemia after the ileostomy was closed. In the two remaining babies (cases 7 and 8) the bowel obstruction was treated with repeated enemas with iohexol from day 3 after birth; one (case 7) responded well and recovered after passage of a meconium plug, but the other did not respond and died from severe respiratory distress syndrome on day 8.

Comment

In pregnancies in which uteroplacental insufficiency is diagnosed the finding of a hyperechogenic fetal bowel may be useful as an indicator of obstruction due to meconium. Meconium is a rare cause of neonatal obstruction of the bowel compared with conditions such as congenital malformations of the gastrointestinal tract and paralytic ileus associated with respiratory distress. Hence antenatal detection of hyperechogenic bowel may allow a correct diagnosis to be made earlier and specific treatment to be started sooner, possibly reducing the need for laparotomies. A prospective study is being carried out to establish the value of hyperechogenic bowel in predicting obstruction due to meconium.

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