The similarity of the success rates of mebeverine and hyoscine butylbromide is of particular interest in view of the opinion that hyoscine butylbromide ought to be wholly ineffective.⁹⁻¹⁰ In combination with lorazepam and a bulking agent, hyoscine butylbromide improved 15 out of 24 patients and was almost as effective as the combination of mebeverine with Motival and a bulking agent.

The use of a subjective measure of assessment in irritable bowel syndrome, such as a patient's impression of an improvement in symptoms, has been criticised as inappropriate when psychotropic drugs are included in the treatment. It is argued that a patient with symptoms of irritable bowel syndrome whose anxiety or depression is relieved is likely to feel better whatever his other treatment may be. There does not, however, appear to be much positive evidence to support such a view. In our previous trial lorazepam, alone or in combination, was the least effective of the three agents tested. In the present trial both lorazepam with mebeverine and Motival with hyoscine butylbromide scored less than the 58% average success rate. In addition, as part of the present trial, patients completed a psychometric questionnaire, the results of which will be reported elsewhere. This included a Beck Inventory¹¹ to assess depression and a Spielberger Anxiety Trait Inventory.¹² When the mean scores for these two inventories were determined and the therapeutic success rates for patients scoring above and below the means were stratified and compared they showed no significant differences. In particular, lorazepam was no more effective in improving symptoms in patients who were excessively anxious and Motival was no more efficacious in the patients who were relatively more depressed. Motival has not previously been tested in irritable bowel syndrome, though Motipress tablets, which are equivalent to three tablets of Motival, have been given in combination with bran at a dosage of one tablet at night (M J Lancaster-Smith *et al*, findings to be published). This treatment had beneficial effects on specific symptoms such as pain and diarrhoea in patients with irritable bowel syndrome. The doses given in the present trial were even smaller, and possibly ineffectual in psychotherapeutic terms, so the effects of lorazepam and Motival in irritable bowel syndrome may be unrelated

to their psychotropic potential. Their site of action may be on the peripheral autonomic nervous system rather than on the brain.

It is clearly of importance to know whether the therapeutic value of Motival in combination with ispaghula husk and mebeverine in irritable bowel syndrome is attributable to the fluphenazine component or to the nortriptylene, or whether it is only in combination that these two drugs exert their beneficial effect, and this is currently under investigation.

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SHORT REPORTS

Intrinsic hazard of breech presentation

Because perinatal mortality is higher with vaginal breech delivery¹ elective caesarean section has been advocated for both term² and pre-term³ deliveries. Nevertheless, the widespread practice of caesarean section for breech delivery at term has recently been questioned.⁴ The dangers of caesarean section are mostly to the mother, but it may sometimes be dangerous for the fetus⁵—particularly a preterm fetus when labour is far advanced. To assess how much neonatal depression after caesarean section is associated with breech presentation, we retrospectively studied the outcome of elective caesarean section at term when the fetus presented by the breech compared with the outcome when the presentation was cephalic.

Patients, methods, and results

Data were extracted from the Cardiff Birth Survey from 1970 to 1977, where records of 42 357 singleton pregnancies are stored on magnetic tape. Only pregnancies resulting in a normal mature fetus of over 2.5 kg were considered and antepartum complications such as eclampsia or severe pre-eclampsia, antepartum haemorrhage, haemolytic disease, or heavy smoking and intercurrent medical disorders such as diabetes mellitus, epilepsy, essential hypertension, or chronic renal disease disqualified a patient from further study. All deliveries were by lower segment caesarean section under general anaesthesia. Results were compared by Student's *t* test or the χ^2 test.

A total of 110 breech and 436 cephalic presentations were suitable for study. There were no differences between the mothers in terms of age, weight, or social class distribution, but there were more multigravidae of shorter stature in the cephalic group.

There was no difference between the groups in terms of birth weight or placental weight, but a breech-presenting fetus was more likely to have had a low one-minute Apgar score and to have needed intubation than a cephalic-presenting fetus (table).

Details of 110 cases of breech and 436 of cephalic fetal presentation delivered at term by caesarean section

	Breech (n = 110)	Cephalic (n = 436)	<i>t</i> or χ^2	Significance
Mean ($\pm$ SD) maternal height (cm)	159.3 $\pm$ 66.8	157.3 $\pm$ 67.3	<i>t</i> = +2.76 χ^2 = 45.26	<i>p</i> < 0.01 <i>p</i> < 0.001
Primipara	48%	17%		
Apgar score:				
<3	8.2%	4.6%	χ^2 = 9.69	<i>p</i> < 0.01
4-6	26.4%	16.1%		
7-10	64.5%	79.0%		
Required intubation	25%	14%	χ^2 = 7.46	<i>p</i> < 0.01

Comment

The difference in the proportions of primigravidae and mothers of short stature in the two groups reflects the practice of performing an elective caesarean section for cephalic presentations when there have been mechanical problems in a previous labour. The neonatal

differences show that delivery by lower segment caesarean section is more dangerous when the fetus presents by the breech, even in the best possible circumstances. The greater likelihood of a low Apgar score might be due to an inherent abnormality which in itself had caused the breech presentation but perhaps is more likely to be due to respiratory efforts before delivery of the head. A mature, healthy fetus is probably well able to withstand this extra insult, but for a breech-presenting fetus which becomes distressed during preterm labour the added hazard might be important. If the hypothesis that delay in delivery of the fetal head causes the depression is correct then this is another reason to consider delivery by classical caesarean section in cases of breech presentation where the fetus is already compromised.

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Effects of oral propranolol on parathyroid hormone secretion in chronic renal failure

Parathyroid hormone secretion is stimulated by beta-adrenergic agents¹ and this effect is blocked by propranolol.² Acute infusion of propranolol in uraemic patients has been shown to inhibit secretion of parathyroid hormone,³ and a retrospective study has suggested that treatment with beta-blockers may protect against secondary hyperparathyroidism in haemodialysis patients.⁴ We report a prospective study designed to assess the long-term effects of oral propranolol on plasma parathyroid hormone concentrations in haemodialysis patients.

Patients, methods, and results

We studied four male and five female haemodialysis patients from 12 to 68 years. None of them were taking vitamin D compounds and all were taking aluminium hydroxide preparations. Their fasting plasma concentrations of calcium, phosphate, and immunoreactive parathyroid hormone were measured and they were then treated with propranolol by mouth. Seven received propranolol 40 mg twice daily and the remaining two (both weighing under 45 kg) 20 mg twice daily. Isoprenaline infusion before treatment (0.75-1.0 µg/min) caused a significant increase in mean (±SD) pulse rate of from 79±10 to 96±15 beats/min ($p<0.01$). Repeat isoprenaline infusion during treatment caused little change in pulse rate (68±13 to 70±14). Fasting concentrations were again measured after six and 12 weeks' treatment. All blood samples were taken 48 hours after dialysis. Plasma calcium and phosphate were measured by standard methods and plasma immunoreactive parathyroid hormone by a previously described method.⁵ Statistical analysis was by the Wilcoxon matched pairs rank sum test.

Before treatment one patient was hypocalcaemic, four were normocalcaemic, and four were hypercalcaemic (range 1.68-3.1 mmol/l (6.72-12.4 mg/100 ml), normal range 2.2-2.63 mmol/l (8.8-10.52 mg/100 ml)). Eight patients were hyperphosphataemic (range 1.23-2.36 mmol/l (3.91-7.5 mg/100 ml), normal range 0.8-1.4 mmol/l (2.5-4.5 mg/100 ml)). Seven patients had raised concentrations of immunoreactive parathyroid hormone (range 410-4000 ng/l, normal range 250-950 ng/l). The figure shows the effects of treatment on plasma calcium, phosphate, and immunoreactive

parathyroid hormone concentrations expressed as a percentage of the initial value. There was no significant change in mean plasma calcium throughout treatment. The mean plasma phosphate concentration rose and was significantly higher than baseline values at six weeks ($p<0.05$). Plasma concentrations of immunoreactive parathyroid hormone were below baseline values in seven out of nine patients at six weeks and in five out of six patients at 12 weeks. There was a mean fall in plasma immunoreactive parathyroid hormone at six weeks of 7.8% ($p<0.05$) and at 12 weeks of 14.7%. There was no correlation between changes in plasma calcium or phosphate and changes in plasma immunoreactive parathyroid hormone.

Changes in plasma concentrations of calcium, phosphate, and immunoreactive parathyroid hormone in response to treatment with oral propranolol. Vertical bars indicate SEM. Asterisk indicates $p<0.05$.

Comment

The beta-adrenergic-blocking activity achieved by the doses of propranolol given was significant as judged by the abolition of isoprenaline-induced rises in pulse rate. Plasma concentrations of immunoreactive parathyroid hormone fell during treatment, and this may indicate a direct effect of propranolol on beta-adrenergic receptors in parathyroid tissue.^{1,2} The degree of parathyroid gland suppression during acute propranolol infusion in uraemic patients was much greater³ than that observed in this study. The differences may be accounted for by the significant rise in plasma phosphate concentrations which also occurred during this study. In normal circumstances this would lower plasma ionised calcium concentrations, which would tend to stimulate parathyroid hormone secretion. Hence the low plasma concentrations of immunoreactive parathyroid hormone seen may underestimate the actual degree of parathyroid hormone suppression achieved by propranolol. There were, however, only small reductions in concentrations of immunoreactive parathyroid hormone after three months' treatment, and we doubt whether propranolol has a role in the treatment of established hyperparathyroid bone disease in chronic renal failure.

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