Discussion

The purpose of this study was to examine the value of early mobilisation in whiplash injuries. Our experience had suggested that many patients with whiplash injuries present late, after a period of immobility, with persistent pain and stiffness. Published reports offer no guidance for treating these injuries, though the application of a soft cervical collar in conjunction with simple analgesia and muscle relaxants, followed by gradual mobilisation, is standard practice. Macnab supported this policy together with bed rest initially and use of skull traction if symptoms are severe or persist.[1]

We found that patients who are treated actively show significantly greater improvement in both cervical movement and intensity of pain compared with patients treated in the standard way. At four weeks a significant increase in cervical movement occurred in the patients given active treatment ($p<0·001$) but not in those given standard treatment. At eight weeks cervical movement was significantly greater in the patients given active treatment than those given the standard treatment ($p<0·05$), indicating that the increase in cervical mobility occurred earlier and to a significantly greater degree with active treatment.

The assessment of pain poses problems because of its subjective nature. We used a modified linear analogue scale from 0 to 10, representing the two extremes of pain. Patients scored their pain according to its severity. Such pain scales are both simple and effective to administer.[9] We found that all patients scored in a consistent fashion despite being unaware of their previous responses. At both four and eight weeks the improvement in pain was significantly greater in the group given active treatment, so that these patients had significantly less pain at four ($p<0·05$) and eight weeks ($p<0·0125$) compared with the patients given standard treatment.

In conclusion, our results confirmed expectations that initial immobility after whiplash injuries gives rise to prolonged symptoms whereas a more rapid improvement can be achieved by early active management without any consequent increase in discomfort.

We thank Mr F Ward for allowing us to study patients under his care and also the casualty officers and the nursing staff of the accident and emergency department for their help.

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SHORT REPORTS

Randomised trial of self hypnosis for analgesia in labour

We undertook a randomised trial to evaluate the effect of self hypnosis on pain relief, satisfaction, and analgesic requirements for women in their first labour.

Patients, method, and results

Criteria for inclusion in the trial were normal pregnancy and a desire to avoid epidural anaesthesia. Eighty two primigravidas were recruited and randomly allocated to the hypnosis group (42 women patients) or the control group (40). Thirteen women were subsequently excluded because of pre-eclampsia (one), breech presentation (three), or delivery by caesarean section (nine). Four failed to attend for hypnosis. Thus we evaluated 29 patients in the hypnosis group and 36 in the control group.

Both groups attended routine weekly antenatal classes. Women in the hypnosis group were also seen individually every week from 32 weeks' gestation. Suggestions were made under hypnosis regarding relaxation and pain relief. Patients were encouraged to imagine warmth or anaesthesia in one hand and shown how to transfer this to the abdomen. Hypnotic depth was assessed with the Stanford hypnotic clinical scale.[1] Five patients were good hypnotic subjects, 19 moderate, and five poor.

The table shows the duration of pregnancy and labour, analgesic requirements, and mode of delivery. Overall, 17 of the 65 women received epidural analgesia. The incidence of normal deliveries was lower in women who received epidurals (3/17 (18%)) than in those who did not (39/48 (82%); $\chi^2=6·25$, $p<0·01$). There was no difference in the proportion of women given epidural analgesia between the hypnosis and control groups. Good or moderate subjects had fewer epidurals (4/24) than did poor subjects (4/5; $p<0·01$).

All patients were questioned about pain relief and satisfaction in labour using a linear analogue scale. There was no significant difference between the two groups in terms of efficacy of pain relief. Of the women who used hypnosis, 15 (52%) were "very satisfied" with labour (score 8-10 on linear analogue scale) compared with eight (23%) in the control group ($p=0·08$). Scores were similar in good and poor hypnotic subjects. Seven women, all good or moderate hypnotic subjects, reported that hypnosis had been instrumental in reducing anxiety and helping them cope with labour.

Effect of hypnosis on use of analgesia and mode of delivery

	Hypnosis group (n=29)	Control group (n=36)	Significance
Mean duration of pregnancy (weeks)	39·9	39·3	p<0·05
Mean duration of labour (h)	12·4	9·7	p<0·05
Analgesia*:			
Nil/Entonox	6 (21)	7 (19)	NS
Pethidine	15 (52)	20 (56)	
Epidural	8 (27)	9 (25)	
Mode of delivery*:			
Spontaneous	24 (83)	25 (69)	NS
Forceps	4 (14)	9 (25)	
Ventouse	1 (3)	2 (6)	

*Figures are numbers (%) of patients.

Comment

In a non-randomised trial of self hypnosis Davidson found that the first stage of labour was significantly shortened, analgesia was more effective, and labour was a more pleasant experience.[2] Our small randomised trial did not show increased efficacy of analgesia in women undergoing hypnosis. Overall, the proportions of women given epidural analgesia were similar in the hypnosis and control groups. Good or moderate hypnotic subjects appeared more likely to avoid epidural anaesthesia than poor subjects. As with previous results, there was a trend for labour to be more satisfying for women who used hypnosis. A subset of good or moderate hypnotic subjects found self hypnosis exceptionally helpful.

Charles *et al* failed to confirm Davidson's finding of shortened labour in women using hypnosis.[3] We found that labour was significantly prolonged in the hypnosis group. The mean duration of pregnancy was also increased, though an additional three or four days may not be clinically important. The mechanisms by which hypnosis might alter the obstetric course are conjectural; modification of hypnotic technique (for example, using appropriate posthypnotic suggestion) could perhaps obviate this effect.

This is the first randomised trial of hypnosis in labour. Self hypnosis seems not to be an effective form of analgesia for routine use, though it may help to make childbirth a more satisfying experience. We think it reasonable to comply with a request for a trial of hypnosis in labour, provided that the woman is a good or moderate hypnotic subject. Prolongation of pregnancy

and labour, might ensue, and clinicians using hypnosis should be aware of this unexplained effect.

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Preparing diabetic patients for x ray examinations: potential hazards

Diabetes affects some 1-2% of the population and the *x* ray department is often called on to aid in the management of diabetic patients. Certain radiological investigations require preparation of the patient—for example, starvation, purgation, or fluid restriction. These preparations may be hazardous in diabetics, particularly those treated with insulin or oral hypoglycaemic agents, unless instructions are given to adjust diabetic treatment. Recently two insulin treated diabetic patients attending for barium meals as outpatients suffered hypoglycaemic coma in our *x* ray department while waiting for their examination. These patients had been given their morning insulin injections and attended the department starving.

In this prospective study of outpatients we assessed whether diabetics had been instructed to adjust their diabetic treatment before attending for radiological investigations and what diabetic information had been given on the *x* ray request form.

Patients, methods, and results

The study was performed prospectively in a large district general hospital. During two months patients attending for outpatient investigations (requested by hospital doctors and general practitioners) were asked if they were diabetic, what diabetic treatment they were taking, and what instructions they had received from the referring doctor. Of 6944 patients referred, 114 (1·6%) were diabetic. Thirty two of these required some form of preparation before their investigation (see table). In 16 patients diabetes was mentioned on the request form. Only three of these, however, recalled the referring doctor warning that alteration in their diabetic treatment may be required to comply with the *x* ray preparation. In the other 16 patients diabetes was disclosed only after direct questioning by the booking clerk. Eleven of these were being treated with insulin or oral hypoglycaemic agents and were requested to starve from midnight or restrict oral fluids. None was warned of the possible hazards by the referring doctor.

Radiology department outpatients: 32 diabetic patients requiring preparation during two months

Diabetes mentioned on request form	Diabetic treatment	Starve from midnight*	Fluid restriction†	Low residue diet and purgation‡
Yes	Insulin	4	1	1
	Oral agent	4	2	3
	Diet			1
No	Insulin	2	1	
	Oral agent	3	5	
	Diet	3	1	1

* Starve from midnight—for barium swallow, small bowel meal, oral cholecystogram, selected ultrasound scan.
† Fluid restriction—six hours for intravenous urography.
‡ Low residue diet and purgation—for barium enemas.

Comment

This study shows that diabetes is frequently forgotten or ignored by doctors requesting outpatient radiological investigations. Most doctors assume that patients will be instructed by the *x* ray department on how to modify their insulin or oral drug treatment. Unless the appointment clerk specifically asks all patients booking these procedures about diabetes and its treatment many diabetics (half in this study) will be instructed to starve or restrict fluids and receive no advice on how to modify treatment. Intelligent patients will either alter their treatment appropriately or seek further advice. Many, however, do not, become confused, and may or may not omit their insulin or oral drug on the day of investigation. Starving may induce hypoglycaemia, and some insulin dependent patients may rapidly develop ketosis if insulin is omitted for more than a few hours. Both general practitioners and hospital staff (consultant and junior doctors) were equally poor at mentioning diabetes on the request form. Where diabetes was indicated it was often unclear, and abbreviations were common—"DM," "IDDM," "DM on tab," "DM on ins," etc.

A particular problem was highlighted in our study. Patients referred for intravenous urography are normally instructed to restrict fluids beforehand. Dehydration in diabetes, however, may precipitate renal damage.[1] Ten patients were referred for intravenous urography but in only three was diabetes mentioned on the request form. We make the following recommendations for managing diabetics treated with insulin or oral hypoglycaemic agents[2]:

Starve from midnight—Patients asked to starve from midnight should not take their morning insulin or oral hypoglycaemic drug. They should be seen first on a morning list. Facilities should be provided for the patient to be given insulin or oral drug and breakfast.

Fluid restriction—Patients attending for urography are usually instructed to restrict their fluid intake and to starve for six hours before the investigation. The diabetic patient should not have his fluid restricted. Again he should be first on the morning list and facilities should be provided for giving insulin and breakfast. A low osmolar contrast agent, which is less nephrotoxic, should be used.[1]

Low residue diet and purgatives—This preparation is complicated. Many insulin treated patients need to be admitted for 24 hours beforehand to stabilise their diabetes and ensure adequate colonic preparation. If it is not possible to perform the enema first on a morning list an insulin and dextrose infusion should be given.

It is the responsibility of the requesting doctor to ensure (*a*) that the *x* ray department is aware that the patient is diabetic and (*b*) that treatment with oral drug or insulin is adjusted to comply with the *x* ray preparation. If a patient does arrive fasted and has taken insulin or oral drug that morning a few sugar lumps in a small amount of water should prevent hypoglycaemia.

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Deep vein thrombosis in patients with superficial thrombophlebitis of the leg

Superficial thrombophlebitis is considered to be a benign disease, often a complication of varicose veins. Morphologically there is no difference between thrombosis in the superficial and deep venous systems. Superficial thrombophlebitis may be complicated by pulmonary embolism and may be fatal.[1,2] We established by means of phlebography the prevalence of deep vein thrombosis in patients presenting with superficial thrombophlebitis.

Patients, methods, and results

We studied 56 consecutive patients (21 men, 35 women) with symptoms and signs of superficial thrombophlebitis in the lower legs; the median age was 58 (range 26-84) years. Patients with infusion thrombophlebitis were excluded. After a clinical diagnosis of superficial thrombophlebitis (palpable elongated subcutaneous lumps along the axis of superficial veins, tenderness, swelling, and redness) the patients underwent ascending phlebography to detect deep vein