those without environmental insults or behavioural problems, as suggested in Drs Newell and Green's algorithm, diagnoses would have been missed.

The three studies quoted were performed more than 10 years ago. Subsequent refinements in techniques of chromosome analysis allow identification of minor chromosome abnormalities that might previously not have been recognised—for example, in our series the X autosome translocation and the chromosome 15 deletion. We recently saw a child with developmental retardation and hypotonia with no "hard" dysmorphic features who was 48, XXYY and a boy with mild retardation and pronounced behavioural disorder who was fragile (X) positive. Neither of these children would have had chromosomes checked under the algorithm. Boys with the fragile (X) syndrome may have fits, but these should not debar them from chromosome analysis.

We would therefore recommend that chromosome analysis should be included in the routine investigation of children with mental retardation, irrespective of findings in the history or clinical examination.

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Stress hyperglycaemia and cause of death in non-diabetic patients with myocardial infarction

SIR,—We reported an association between hypoglycaemia and poor outcome after acute myocardial infarction in subjects with concentrations of glycosylated haemoglobin that indicated a low probability of premorbid diabetes mellitus.¹ The major determinants of hyperglycaemia in these patients were raised concentrations of adrenaline, noradrenaline, and cortisol, which were generally independent of the size of the infarct. Drs M W Beckett and D J Shane (29 November 1986, p 1441) noted a previously described relation between raised catecholamine concentrations and subsequent risk of cardiac arrest² and requested an analysis of the plasma glucose concentrations in relation to the cause of death of patients with myocardial infarction.

The table shows the plasma glucose concentrations in patients admitted with acute myocardial infarction who had normal (6.9%) or borderline (6.9-7.8%) glycosylated haemoglobin concentrations. Patients were classified according to major cause of death, so that patients in cardiogenic shock were identified as such even if they were suffering from a terminal arrhythmia. Three of the patients in our study were not included in the table because of deaths from unrelated causes. Patients with normal glycosylated haemoglobin concentrations had significantly higher plasma glucose con-

centrations in both groups of patients who died compared with survivors. Because of the numbers studied the raised plasma glucose concentrations were seen only in patients dying of pulmonary oedema or cardiogenic shock in the borderline abnormal glycosylated haemoglobin group. Though there was a trend for the plasma glucose concentrations to be higher in patients dying of pulmonary oedema or cardiogenic shock than in those dying of cardiac arrest, the differences were not significant.

We reported an association between hyperglycaemia and poor outcome, mainly due to heart failure, even in patients with small infarcts. These data suggest that hyperglycaemia may occur as a result of raised catecholamine and cortisol concentrations in patients with pulmonary oedema or cardiogenic shock. The finding of hyperglycaemia, however, in patients who subsequently died of cardiac arrest suggests that high catecholamine concentrations may contribute to, as well as reflect, a poor prognosis.

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1 Oswald GA, Smith CCT, Betteridge DJ, Yudkin JS. Determinants and importance of stress hyperglycaemia in non-diabetic patients with myocardial infarction. *Br Med J* 1986; 293:917-22.

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Relation between phenotype and banal melanocytic naevi

SIR,—Whereas an unexpected association between a large number of naevi and a dark complexion was shown by Dr J S C English and colleagues (17 January, p 152), we have shown that subjects with a light complexion tend to have more naevi.¹ Our study was hampered, however, by the heterogeneity of the subjects' ages (children and young adults) and by the fact that all visible naevi were counted, irrespective of diameter, although small naevi may be confused with freckles or other pigmentary lesions.

We therefore studied the prevalence of naevi in a group of 508 white students aged 18-30. For practical reasons, naevi were counted only on the chest, back, and legs. Pigmentary traits were analysed according to the subjects' self reported histories of burning and tanning (tendency to burn after one hour of exposure to sun in early summer and tendency to tan after regular exposure to sun during the summer, respectively). The table shows the median numbers of naevi for the various categories. The Kruskal-Wallis test was used to measure the significance in each subgroup.

The number of naevi seemed to be strongly related to complexion, those with light complexions generally having more naevi. This was

Median number (range) of naevi in volunteers related to self reported tendencies to burn and tan

Complexion trait	No of subjects	No of naevi	
		2-5 mm in diameter	>5 mm in diameter
<i>Men</i>			
Tendency to burn:			
None	92	7.5 (0-74)	1 (0-18)
Mild	65	11 (0-68)	1 (0-25)
Severe	20	12 (0-30)	1.5 (0-15)
Significance		p=0.23	p=0.12
Tendency to tan:			
Intense	31	6 (0-74)	0 (0-9)
Moderate	99	9 (0-68)	1 (0-18)
None	47	13 (0-49)	1 (0-25)
Significance		p=0.08	p=0.08
<i>Women</i>			
Tendency to burn:			
None	140	5 (0-66)	0 (0-19)
Mild	134	6 (0-76)	0 (0-12)
Severe	57	8 (0-49)	1 (0-23)
Significance		p<0.01	p=0.01
Tendency to tan:			
Intense	34	4 (0-29)	0 (0-5)
Moderate	162	5 (0-44)	0 (0-11)
None	135	8 (0-76)	1 (0-23)
Significance		p<0.01	p=0.01

particularly true of women, possibly because of larger group sizes.

It is rather disturbing that our findings clearly contrast with those of Dr English and colleagues. They rightly emphasise that large numbers of naevi are the strongest risk factor for melanoma. Furthermore, the risk of melanoma is greater in subjects with light complexions, and therefore those with light complexions would be expected to have more naevi. As counts of naevi may have important implications for the epidemiology and aetiology of cutaneous melanoma further investigations are warranted.

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1 Rampen FHJ, van der Meeren HLM, Boezeman JBM. Frequency of moles as a key to melanoma incidence? *J Am Acad Dermatol* 1986;15:1200-3.

Syringe driver in terminal care

SIR,—With regard to Dr Simon Dover's article on syringe drivers (28 February, p 55), many of our patients receiving cancer chemotherapy for solid tumours now have subclavian lines or implanted venous access devices. These may remain safely in place for many years, being maintained by the patients themselves. When the time comes to withhold further active treatment for the tumours we try to ensure that these lines are kept in place as they are extremely useful in terminal management. We believe that the systemic venous route allows better control of blood concentrations than subcuticular or intramuscular administration, and we suggest that, wherever possible, these lines should be kept in place and used.

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SIR,—We use syringe drivers, as described by Dr Simon Dover (28 February, p 553), on the general wards of our district general hospital as well as in the community and would like to make two points about their use.

Firstly, the nurses have become so used to them

Mean (SD) plasma glucose concentrations in patients admitted with acute myocardial infarction related to glycosylated haemoglobin concentration and outcome

Glycosylated haemoglobin (%)	Survivors		Patients who died from pulmonary oedema or cardiogenic shock		Patients who died from primary cardiac arrest	
	No	Glucose	No	Glucose	No	Glucose
<6.9	146	7.89 (2.44)	27	10.99 (3.99)***	9	9.85 (2.87)**
6.9-7.8	34	9.88 (3.38)	13	12.70 (4.19)*	3	11.57 (3.15)

Patients v survivors: *p<0.02, **p<0.01, ***p<0.0001 (Mann-Whitney U test).