Ultrasonography has obvious advantages in an emergency including safety, quickness, and lack of upset to the ill patient.

We thank the Department of Medical Illustration at Stobhill Hospital for the print. We also thank Dr. Agnes Macgregor for permission to include the first case. The typing was kindly done by Mrs. Nasmyth and her staff.

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Discussion

Delirium tremens and alcoholic cardiomyopathy were rejected in favour of a unitary diagnosis of beriberi (see table).² The dramatic response to two injections of parenterovite accorded with the diagnosis.⁴ Alcoholic cardiomyopathy was considered unlikely in a high output state with normal E.C.G.s. Alcoholism is a growing problem, and food is expensive. The risk of sudden cardiac failure in wet beriberi is so severe that the diagnosis should be considered. Together with a clinical examination a pyruvate test is a quick and safe indicator of this condition, and treatment is immediately effective.⁴

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Wet Beriberi in an Alcoholic

Alcoholism is now not usually associated with nutritional deficiency,¹ but when it occurs, inadequate vitamin B₁ in the diet may lead to heart failure. In this condition (wet beriberi) there is fluid retention and cardiac dilatation in a high output state. The following report is of one of two cases of wet beriberi seen in six months in a small catchment area.

Case Report

A retired bricklayer aged 65 was referred for psychiatric treatment after his second admission to a surgical ward with ascites and gross oedema of both legs. The third night after admission he became confused and aggressive and signed himself out, only to be readmitted within a week with an identical picture; on the second night he was again confused and aggressive.

He gave a history of severe chronic abuse of alcohol and a prolonged inadequate diet. Drinking had occurred up to and between admissions and periods of confusion had occurred at home over six months. He had had amnesias for years but never delirium tremens or fits. All other aspects of the history were regarded as insignificant. Crepitations were heard at both bases of the lungs, and nothing abnormal was found on extensive and sophisticated investigations except an increase in heart size with congestion of both lungs in the presence of repeatedly normal electrocardiograms (E.C.G.s). Psychiatric opinion was sought before laparotomy. The patient was very flushed with a dry hot skin and the blood pressure was 160/90 mm Hg. There was no tremor or anxiety. He seemed calm but fatuous and he confabulated, showed a total loss of secondary memory, and was disorientated for date but not for person and place. There was no thought disorder. He showed the mental symptoms combined with a high output cardiac failure described in the unitary diagnosis of wet beriberi (see table).²

Distinguishing Features of Delirium Tremens and Beriberi

Delirium Tremens	Beriberi
Pallor	Flushed skin
Cold skin	Hot and dry skin
Tremor	No tremor
Ataxia	No ataxia
Anxiety and terror	Irritability and aggression at night only
Hallucinations	Illusions
Disorientation	Disorientation
Memory defect	Memory defect
Response to treatment, 3-4 days	Response to treatment, immediate

Because of the danger of sudden cardiac failure all investigations were discontinued except for a pyruvate tolerance test,³ which gave grossly abnormal results. Parenterovite 10 ml was given intravenously for seven days and the patient was sedated with chlordiazepoxide 10 mg three times a day. Sleep was undisturbed that night and he showed no further confusion of thought or behavioural difficulties. Appetite improved and the oedema resolved in seven days. Psychological assessment confirmed a Korsakoff syndrome, which remained.

When his condition improved and blood pyruvate levels returned to normal he was discharged. But he resumed drinking and presented again with ascites and gross oedema. He was readmitted and responded to treatment. After pyruvate values returned to normal he was discharged but parenterovite was given twice a week by a community nurse. After one month he was well in spite of drinking.

Measles: A Protein-losing Enteropathy

Undernourished children who suffer an attack of measles are often precipitated into overt kwashiorkor.¹ There are several possible explanations for this, perhaps the most important being that protein and calorie requirements are high during any infectious process accompanied by fever. Other contributing factors include the anorexia during the acute phase of measles and the tradition among certain African tribes of withholding animal protein from a child during and after measles.

Measles might also affect the state of nutrition through direct action on the intestinal mucosa. Morley² noted that many West African children had blood in their stools during the first few days after the onset of measles and reasoned that the intestinal mucosa was probably affected similarly to the skin. Other generalized skin diseases have been associated with both maldigestion and protein-losing enteropathy. The following study was undertaken to ascertain whether there is increased protein loss from the intestine during the acute phase of measles in malnourished children.

Patients and Methods

Ten malnourished children with measles were studied two to 14 days after the first appearance of a typical measles rash. Their mean age was 17.1 months, weight 7.06 kg, and serum albumin 31 g/l. Six children with moderate to severe kwashiorkor served as controls. Their mean age was 20.6 months, weight 8.67 kg, and serum albumin 14 g/l. An intravenous injection of 10-15 μ Ci of ⁵¹CrCl₃ solution was given to each child within two hours of

Mean accumulated stool radioactivity expressed as percentage of intravenous dose plotted against time.

Comparison of Mean Lying and Standing Blood Pressures ($\pm$ S.D.) (mm Hg) according to Time of Day

Case No.	No. of Readings	Morning				Evening				Treatment
		Systolic		Diastolic		Systolic		Diastolic		
		Lying	Standing	Lying	Standing	Lying	Standing	Lying	Standing	
1	78	147 ± 11.6	148 ± 10.3	97 ± 12.3	99 ± 9.5	150 ± 13.4	150 ± 11.1	97 ± 12.6	97 ± 14.3	Methyldopa
2	103	146 ± 22.1	149 ± 14.2	111 ± 19.5	113 ± 12.1	147 ± 18.2	151 ± 12.9	112 ± 17.1	116 ± 12.3	Methyldopa
3	87	145 ± 8.2	153 ± 7.0**	97 ± 10.5	103 ± 9.2**	151 ± 9.1	158 ± 7.2**	98 ± 8.9	104 ± 9.1**	Methyldopa
4	77	135 ± 15.2	140 ± 13.6*	106 ± 14.5	113 ± 14.3**	144 ± 13.7	143 ± 12.3	115 ± 27.4	114 ± 22.3	Methyldopa
5	81	155 ± 18.0	155 ± 11.1	114 ± 21.4	117 ± 13.9**	162 ± 16.3	166 ± 12.8**	118 ± 17.3	122 ± 12.4**	Methyldopa
6	34	152 ± 12.0	138 ± 14.9**	118 ± 18.5	107 ± 18.2*	166 ± 11.1	167 ± 4.1	121 ± 19.5	129 ± 17.3*	Debrisoquine
7	58	199 ± 22.1	155 ± 13.2**	127 ± 23.3	103 ± 14.6**	226 ± 18.2	166 ± 11.8**	138 ± 23.9	122 ± 13.1**	Guanethidine
8	92	151 ± 14.3	139 ± 8.3**	100 ± 16.7	99 ± 10.3	162 ± 15.0	152 ± 8.1**	108 ± 11.8	106 ± 6.7**	Guanethidine

*P < 0.05. **P < 0.0005.

admission to hospital, and all subsequent stools passed collected in 24-hour aliquots for four days.³ The total radioactivity of each 24-hour stool was measured and expressed as a percentage of the radioactivity of the injected ⁵¹CrCl₃.

The mean daily accumulated percentage of radioactivity excreted for the two groups of children is shown in the figure. The difference between the two groups was statistically significant on day 3 (P < 0.01). The mean four-day accumulated excretions in the measles and control groups were 5.56% and 2.68% respectively.

Comment

Using ⁵¹CrCl₃ Rootwelt³ reported an average accumulated excretion of 0.83% over five days in normal adults, while Scandellari and Ronconi⁴ gave an upper limit of 1.5% excretion over four days for normal children. Our controls' mean four-day accumulated excretion of 2.68% was similar to that reported by Shukry *et al.*⁵ using ⁵¹CrCl₃-albumin in uncomplicated kwashiorkor.

After measles the mean four-day accumulated excretion was 5.56%, which suggests that during the acute phase of measles in malnourished children there is appreciable protein loss from the intestine, though this is not as great as in regional enteritis or ulcerative colitis. Evidence that the abnormal protein loss is from the large bowel will be presented elsewhere.

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Pilot Study of Home Measurement of Blood Pressure by Hypertensive Patients

There is increasing evidence that moderate hypertension should be treated and that numbers needing supervision are likely to grow. Home blood pressure measurement by the patient would mean fewer visits to the doctor and could benefit both, provided readings are accurate and the patient's anxiety does not increase. Though there have been few studies of patients measuring their blood pressure at home the procedure is established in patients on renal dialysis and has been used for research^{1 2} and for investigating borderline hypertension.³ We wanted to determine whether certain hypertensive patients could measure their blood pressure, how their readings compared with those taken by the doctor, and whether the patients became anxious or depressed.

Patients, Methods, and Results

From patients aged 20-60 years attending a medical clinic we selected those who we thought could co-operate mentally and physically with home measurement. The patients' diastolic blood pressures had been at least 105 mm Hg on two or more occasions. They attended a special clinic every eight weeks for at least six months and learnt to measure their blood pressure with an anaeroid sphygmomanometer and a simple diaphragm stethoscope. Diastolic pressure was taken as phase 4. Readings were taken to the nearest 5 mm Hg. Blood pressure was measured daily before breakfast and in the evening lying and after at least one minute's standing. When the patients saw a doctor both recorded the blood pressure simultaneously. The Middlesex Hospital questionnaire⁴ for measuring neurotic characteristics was completed initially and after six months.

Out of 48 hypertensive patients 24 were excluded because of disability or unwillingness to co-operate. Of the remaining 24 we studied only 10 (eight men and two women, aged 42-60 years); the others, though suitable, could not attend the clinic or were too old. Eight patients completed the study; two could not manage the equipment. Two patients initially had difficulty in recognizing phase 4. Most patients' readings were similar to the doctors' taken at the same time. On 22 occasions doctor and patient recorded lying and standing pressures simultaneously, and all but 33 (37.5%) of these 88 readings were the same. Sixteen differences were for systolic and 17 for diastolic pressures. Fifteen differed by 5, 11 by 10, two by 15, four by 20, and one by 30 mm Hg. Four of the five differences of 20 mm Hg or more were for systolic pressures. The patients tended to record higher diastolic and lower systolic pressures. Standing pressures tended to be lower than lying pressures in those on hypotensive drugs with a postural effect but higher in others. Most patients had higher pressures in the evening (see table). Pressures did not vary with the day of the week and morning pressures at home were similar to those in the afternoon clinic. Home visits showed that the patients understood and used the equipment well and there was no sign of anxiety in the family. The Middlesex Hospital questionnaire scores showed no significant individual increases in anxiety or depression. The initial mean depression score ($\pm$ S.D.) was 4.1 $\pm$ 3.7 and after six months 4.9 $\pm$ 3.6. The mean anxiety scores were 6.7 $\pm$ 3.9 and 6.1 $\pm$ 4.2 respectively.

Comment

Our results show that selected patients could measure their blood pressures at home without depression or anxiety. The difference between patients' and doctors' readings were small enough to be acceptable in practice. Co-operative patients might adjust their own hypertensive treatment within prearranged limits if blood pressures are persistently unsatisfactory just as diabetics adjust their insulin doses. Patients would then need to report to the doctor only infrequently or when readings indicated loss of control. Home blood pressure measurement by the patient may increase his compliance with treatment.

We thank Boehringer Ingelheim for providing the equipment.

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