the ratings of different diagnostic groups yielded no significant differences except that "being in hospital" was more highly regarded by those with alcohol or drug dependence, manic patients rating this as the least helpful (one way analysis of variance; df=6; F=2·224; p<0·05).

Comment

Ironically this study shows that the thing psychiatric inpatients value most about being in hospital is their ability to leave. Of the therapeutic items, simply talking to a care giver, be they doctor or nurse, was widely regarded as the most helpful aspect of care. We emphasise that, unlike some American studies,[1] the sample contained many highly disturbed psychotic patients. Nevertheless, being able to confide in a member of staff was still regarded as rewarding. Contact with other patients, both informally and in ward groups, was not judged favourably. This may be unduly confrontational for some, yet for others may provide a degree of support and exchange of information unavailable elsewhere. Drug treatment was judged on average to be only "quite helpful."

The professionals' opinions were not surveyed, but from the consumer's point of view psychiatric training would be well advised to pay as much attention to "talking therapy" as it does to hospitalisation, treatment with drugs, occupational therapy, and ward rounds. We conclude that just as patients need help to understand the benefits of their drug treatment, so doctors need to be reminded that the time given to talking to the mentally ill in hospital, albeit less than one hour a week according to three quarters of our sample, is time well spent.

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Spacer device with face mask attachment for giving bronchodilators to infants with asthma

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About two fifths of wheezy infants respond to nebulised ipratropium bromide with dramatic improvement in clinical signs and lung function within 15 minutes.[1] Over the past two years we used a disposable coffee cup as a spacer device when administering ipratropium bromide aerosol to young children. Most children aged under 18 months, however, disliked the jet of aerosol hitting their face, and compliance was poor. We adapted a spacer device for a metered dose inhaler (Nebuhaler) by adding a face mask, allowing children of all ages to be given the aerosol.

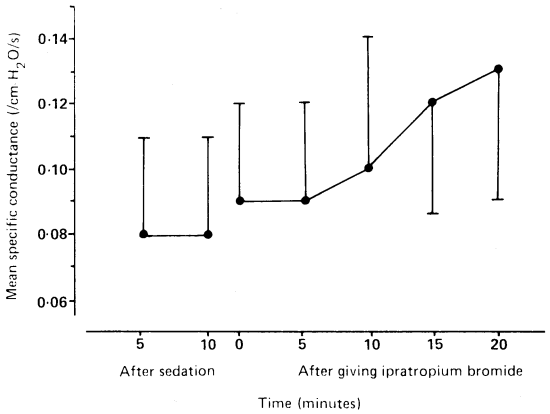
Patients, methods, and results

Eight children admitted to hospital for an exacerbation of wheeze were studied. They were aged 6-13 months (mean 10·5 months), had been admitted with wheezing at least twice previously, and were thought to have benefited from nebulised ipratropium bromide given on admission. Bronchodilator treatment was withheld for at least eight hours before lung function tests were performed.

Infants were sedated with 100-120 mg chloral hydrate/kg. Measurements of airways resistance and thoracic gas volume were made with a modified total body plethysmograph.[2] Specific conductance was calculated and oxygen saturation was monitored. Baseline measurements were made for 15 minutes after sedation.

A soft silicone Laerdal size 2 resuscitation face mask was trimmed to fit over the respiratory port of the spacer device (Nebuhaler). The device was held slightly upright and ipratropium bromide 50 mg was released into the spacer. When placed over the face of an infant it made an airtight seal. The loose valve opening allowed aerosol to be breathed in for about 10 seconds. Five repetitions resulted in a total dose of 200 mg ipratropium bromide. Lung function was measured every five minutes until the child awoke.

Airways resistance and specific conductance improved in seven of the eight patients. Overall, specific conductance at 20 minutes improved significantly compared with baseline values (p<0·01), as did airways resistance at 15 minutes (p<0·002) and at 20 minutes (p<0·001). Oxygen saturation rose from a mean of 89 (SD 6)% to 92 (5)%.



Mean bronchodilatation before and after giving ipratropium bromide to eight children (mean age 10·5 months). Bars indicate 1 SD

Comment

Delivery of ipratropium bromide by a metered dose inhaler with a face mask attachment is a rapid, simple, and cheap alternative to using a nebuliser. Our pilot study showed significant improvement in lung function, a result that correlated well with clinical observation. Most children tolerated the device and its face mask well, and this method was generally preferred to the aerosol with a coffee cup. The face mask seemed to act as a rebreathing chamber: the infants took increasingly large breaths during the 10 second administration, which may have enhanced aerosol deposition in the airways. Paradoxical

deterioration in lung function, which has been described after nebulised asthma treatment in infancy, did not occur.[3,4]

Ipratropium bromide acts on the nose by decreasing secretions but has not been shown to alter resistance in the nasal airway. As two infants with complete nasal blockage showed a 20% improvement in specific conductance we assume that the improvement seen after ipratropium bromide was due to bronchodilatation.

A Nebuhaler has been shown to be effective in giving inhaled budesonide to young children.[5] We used this delivery system to give budesonide and β_2 agonists to asthmatic children aged under 2 and obtained dramatic improvement in many cases (unpublished results).

Though this method of delivery does not replace nebulisers in severe attacks of asthma in young children, it may enable many children without access to a nebuliser to be treated successfully at home. Handicapped patients who cannot use other inhalation devices may also benefit.

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Profound hypotension after atenolol in severe hypertension

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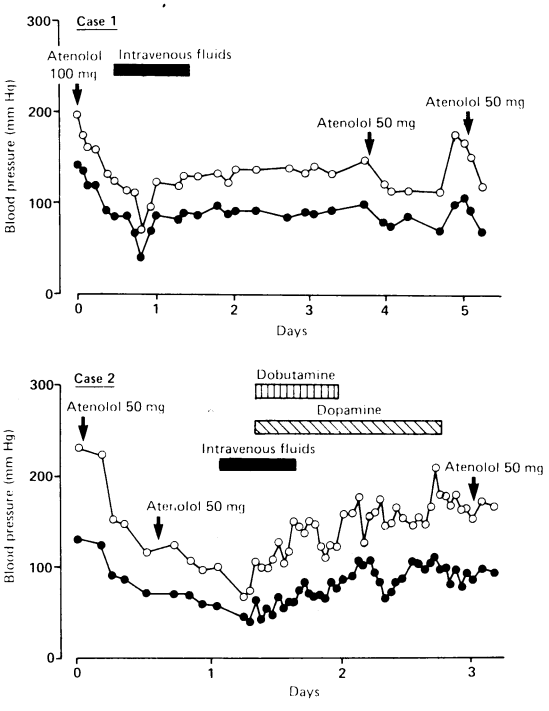
Because precipitous falls in blood pressure in patients with severe hypertension may cause ischaemic damage to vital organs[1] reports have suggested that parenteral treatment should be avoided where possible and patients should be treated with one or two oral drugs.[2,3] Such advice, however, does not always guarantee safe reduction in blood pressure.

Case reports

Case 1—A 27 year old woman, previously untreated, complained of thirst, polyuria, and weight loss within eight weeks of taking a low oestrogen contraceptive pill (Loestrin 20). Her blood pressure was 192/142 mm Hg, and she had bilateral retinal haemorrhages, exudates, and papilloedema, confirming malignant hypertension. She was hyponatraemic (128 mmol/l) and hypokalaemic (2·8 mmol/l) but had normal renal function (serum creatinine concentration 102 μmol/l). After she took 100 mg atenolol her blood pressure fell considerably, reaching its lowest point, 72/40 mm Hg, at 18 hours (figure). Her serum creatinine concentration rose transiently to 138 μmol/l, but there was no other evidence of ischaemia in other organs. Although her blood pressure was restored after infusion of 1 litre physiological saline, she did not require antihypertensive treatment for three days. Her renin activity and plasma concentrations of angiotensin II and aldosterone before treatment were shown subsequently to have been raised considerably at 2871 (normal range 9-50 mU/l), 1099 (5-35) pmol/l, and 4900 (<500) pmol/l respectively. Renal arteriography gave normal results. Her blood pressure was subsequently controlled adequately at 130/90 mm Hg with atenolol 100 mg and chlorthalidone 25 mg daily.

Case 2—A 51 year old woman, previously untreated, gave a three month history of gradually deteriorating vision and was found to be hypertensive with blood pressure 266/152 mm Hg. She had bilateral retinal haemorrhages, exudates, and papilloedema. Her serum sodium concentration was in the low normal range (137 μmol/l), she was hypokalaemic (2·7 mmol/l), and her renal function was moderately impaired (serum creatinine concentration 178 μmol/l). She was treated with atenolol 50 mg orally. Her blood pressure fell to 150/90 mm Hg 10 hours after the first dose and to 70/48 mm Hg 14 hours after the second dose (figure); her serum creatinine concentration rose transiently to 245 μmol/l. Despite infusion of 500 ml physiological saline her blood pressure remained low until dobutamine and dopamine were given, and further antihypertensive treatment was not required for 36 hours. Her renin activity and plasma concentrations of angiotensin II and aldosterone before treatment were shown subsequently to have been abnormally high at 687 mU/l, 191 pmol/l, and 616 pmol/l respectively. Renal arteriography showed atheromatous occlusion of the right renal artery. Her blood pressure was controlled at 180/94 mm Hg with enalapril 10 mg daily.



Blood pressure in two previously untreated patients with malignant hypertension taking atenolol. ○=Systolic pressure; ●=diastolic pressure

Comment

Increased plasma renin activity is a common, although not invariable, finding in malignant hypertension[4] and occurs particularly in unilateral renal artery disease. Some hypertensive patients with extremely high renin activities develop hyponatraemia and hypokalaemia, often with thirst, polyuria, and weight loss, and are then said to have the hyponatraemic hypertensive syndrome.[5] A likely explanation for this is that there is a positive feedback loop in which a high angiotensin II concentration raises