fication on this point would be welcome, as well as how the actual trial tablets compare with the commercially available. Since comparative trials of different drugs are now more common it seems important to report not only the relative merits of various drugs tested but also the absolute merits in terms of the variables used, as well as to pay close attention to all aspects of methodology.—I am, etc.,

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Potassium Deficiency during Treatment with Brinaldix K

SIR,—We wish to report four cases of severe potassium deficiency seen recently in this hospital in patients receiving Brinaldix K.

Case 1.—A 48-year-old woman was admitted to hospital with weakness, depression, and lassitude. For four months she had been known to be hypertensive, with an impaired creatinine clearance (12 ml/min), and had recently developed cardiac asthma. In addition to clonidine 0.1 mg four times daily for her hypertension she had been receiving digoxin 0·25 mg daily and Brinaldix K two tablets daily for three weeks. Severe hypokalaemia was found (see table) and treated by withdrawal of Brinaldix K and addition of Sando-K, with return to normal values over the following three days. In spite of the impaired renal function and hypokalaemia, no electrocardiographic features of digitalis toxicity were found.

Case 2.—A 69-year-old woman known to be hypertensive for six months was admitted to hospital with extreme weakness, nausea, and postural hypotension. Her hypertension was at the time being treated with clonidine 0.1 mg twice daily. She had been taking digoxin 0.25 mg daily for several months, and on admission showed gross electrocardiographic evidence of digitalis toxicity, with coupling and ST-segment depression. Electrolyte estimations confirmed marked hypokalaemia. For one month prior to admission she had been receiving Brinaldix K one tablet daily. This was discontinued after admission, and potassium supplements added, with return of serum potassium values to normal levels in seven days and disappearance of digitalis intoxication in three days.

Case 3.—A 79-year-old woman was admitted to hospital having been found on her kitchen floor, where she had presumably been for some hours. She was not hypothermic. Six weeks previously she had been discharged from hospital after treatment for congestive cardiac failure with frusemide. On return home her diuretic was changed to Brinaldix K two tablets daily. When readmitted asymptomatic hypokalamia was found. Her diuretic was changed to frusemide and Slow-K added, with return to normal of plasma potassium levels in five days.

Case 4.—A 58-year-old woman was readmitted to hospital with congestive cardiac failure and chronic obstructive lung disease. She had been discharged one week previously following a period of treatment for the same condition. In hospital she had received frusemide and Slow-K, and this was replaced by Brinaldix K on her discharge. Electrolytes prior to discharge had been normal. When readmitted asymptomatic hypokalaemia was found and reverted to normal values in three days upon withdrawal of Brinaldix K and administration of potassium supplements.

The use of potassium supplements together with diuretic therapy is widely accepted as necessary. It is perhaps less well appreciated that to be fully effective potassium should be given in the form of chloride. Potassium deficiency due to diuretics is often accompanied by hypochloraemic alkalosis. Potassium in the form of bicarbonate may aggravate the alkalosis and thereby worsen the hypokalaemia in spite of the administration of potassium ions.[1]

Each Brinaldix K tablet contains clopamide 20 mg and potassium 12 mEq but only 3·4 mEq of chloride ions. The remaining anion is present as bicarbonate. Clopamide 60 mg is more potent than bendrofluazide 7·5 mg[2], so that it is likely that the patient receiving Brinaldix K is receiving a greater effective amount of diuretic than with other combined diuretic and potassium preparations. We believe that this combination of a more potent diuretic dose together with inadequate chloride and significant bicarbonate content carries a risk of induced hypokalaemia. A striking feature in our patients was the short duration of treatment with Brinaldix K, and the knowledge from previous attendance that prior to receiving Brinaldix K hypokalaemia had not been present in spite of other diuretic and potassium therapy being administered.

While in general deprecating the use of combined diuretic and potassium preparations, we accept that there are some indications for their use, but we feel that in its present form Brinaldix K should not be used in preference to the non-effervescent preparations containing a thiazide with potassium as chloride in a slow-release form. As Brinaldix K is an effective diuretic and pleasant to take, we feel that the chloride content should be increased and the bicarbonate reduced or omitted.—We are, etc.,

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2 Briggs, J. D., McSween, R. N., and Kennedy, A. C., *Postgraduate Medical Journal*, 1965, **41**, 193.

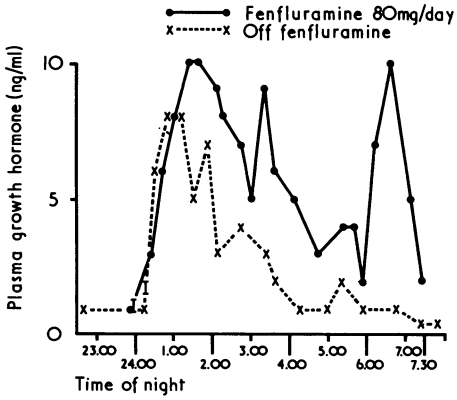
Case	Serum Electrolytes (mEq/l.)			Blood mg/100ml Urea	Dose of Clopamide (mg/day)	Duration of Treatment with Brinaldix K (weeks)	Reversal Time of Hypokalaemia (days)
	Na	K	Cl				
1	140	1·6	85	75	40	3	3
2	136	1·8	85	67	20	4	7
3	139	2·6	93	31	40	6	5
4	140	2·6	94	42	20	1	3

Fenfluramine and Growth Hormone Release

SIR,—Mr. W. R. Sulaiman and Dr. R. H. Johnson (12 May, p. 329) describe the effect of a single intravenous injection of 20 mg of fenfluramine on the metabolic response to exercise lasting 20 minutes and report a suppressive effect of this drug on the secretion of growth hormone normally encountered in response to exercise. They then suggest a hypothalamic site of action for the drug and draw inferences for clinical practice.

We would remind them of almost completely contrary evidence[1] presented in a symposium report from which they quote two references. This other study involved obese patients—to whom fenfluramine is commonly administered. The dose was 40 mg orally four times daily for one week before repeating the exercise study. Plasma growth hormone concentrations showed striking increments with exercise, and these were even greater on the drug—"the differences between the mean values . . . when fenfluramine was added were statistically significant at 1½, 2½, and 4½ hours after the start of the period of exercise." Again contrary to Mr. Sulaimain's and Dr. Johnsons' findings, changes in blood glucose and the plasma concentration of insulin were not found during periods of exercise more prolonged than those they used.

Furthermore, the most vigorous and consistent secretion of growth hormone occurs during natural sleep. Having previously mentioned that chronic intake of fenfluramine, far from suppressing growth hormone secretion during sleep, may lead to increased plasma levels,[2] we now show in the accompanying figure an example where plasma levels (in ng/ml) were consistently higher throughout a night, in the case of a man who had received oral fenfluramine for over two months, than was the case six weeks later when he had been off fenfluramine for a month. Blood was withdrawn without disturbing sleep, using a venous catheter technique.[3]



In studying the mode of action of a drug such as fenfluramine it would seem important that the conditions of administration should resemble as nearly as possible those in which it is commonly used.—We are, etc.,

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1 Brockie, B. K., Brown, P., Ahmed, N. E. L., Shirling, D., and Strong, J. A., *South African Medical Journal*, 1971, **45**, Suppl. (June), p. 26.
2 Lewis, S. A., Oswald, I., and Dunleavy, D. L. F., *British Medical Journal*, 1971, **3**, 67.
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Transmission of Trichuris trichiura

SIR,—Dr. D. M. Lynch and others (14 October 1972, p. 73) described the incidence