DR HAYES: Yes. But we have no explanation for the inappropriately raised PTH concentration.

This conference was recorded and edited by Dr W F Whimster.

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APPOINTMENTS OF SPEAKERS

(1) Professor R Mahler, MB, FRCP, professor of medicine, Welsh National School of Medicine, Cardiff CF4 4XN.
(2) Dr T M Hayes, MB, FRCP, senior lecturer in medicine, Welsh National School of Medicine, and consultant physician, University Hospital of Wales, Cardiff CF4 4XN.
(3) Dr D Pyke, MD, FRCP, physician in charge, diabetic clinic, King's College Hospital, London SE5 9RS.
(4) Sir Douglas Black, MD, FRCP, president, Royal College of Physicians.
(5) Dr P C Farrant, MD, FRCP, consultant physician, Dartford and Gravesham Health District.
(6) Professor R Hoffenberg, MD, FRCP, professor of medicine, University of Birmingham, Birmingham.

Clinical Topics

Overdose from Lomotil

DIANNE PENFOLD, GLYN N VOLANS

British Medical Journal, 1977, **2**, 1401-1402

Despite numerous reports on the hazards of taking overdoses of the anti-diarrhoeal agent Lomotil (atropine sulphate and diphenoxylate hydrochloride),[1-5] these incidents still occur, sometimes being fatal. A prospective study was carried out by the National Poisons Information Service in 1976 to assess the extent of overdosage with Lomotil.

Methods

For each call made to us from 1 January to 31 December 1976 asking for advice on treating a case of Lomotil overdose we sought further information on suspected dose, symptoms, treatment, and eventual outcome. From this information we tried to assess the relation between age and the severity of symptoms and between dose and severity. We classified each case according to the symptoms present on admission. Group 1 included people who showed no symptoms. Group 2 comprised those with pronounced symptoms: drowsiness, flushing, dry mouth, tachycardia, dilated pupils, rash, and nausea. Group 3 comprised patients with severe symptoms: grade IV coma, respiratory depression or arrest, or cardiac arrest.

Results and comment

Throughout the year 86 episodes of Lomotil overdosage were reported, 71 of them in children aged under 5 (table I). Thirty-four of the patients had pronounced symptoms (group 2), and seven—all children under 12—were severely ill (group 3).

Further information was available for 48 cases (table II). Of the seven patients with group 3 symptoms, three had taken over 10 tablets of Lomotil, and the dose was unknown in the other four. Three of the 19 patients with pronounced symptoms had taken one to five tablets, three had taken six to 10, six had taken 11 to 20, two had taken 21-30, and five had taken an unknown number.

A 2½-year-old who had ingested about 20 tablets suffered respiratory and cardiac arrest and died despite the administration of naloxone. On the other hand, a 2-year-old who was reported to have taken 20 tablets remained asymptomatic. Possibly the reported size of alleged doses was inaccurate, or young children may vary considerably in their response to an overdose of Lomotil. We reviewed data from earlier years to see whether they threw any light on the relation between dosage and the severity of symptoms. A 2-year-old boy reported to have ingested 12 tablets showed severe symptoms (cardiac arrest at eight hours) and died after three days with pneumonia and cerebral oedema (nalorphine was administered). Another 2-year-old presented in grade IV coma after a reported ingestion of only three or four tablets. He was given naloxone and finally regained consciousness two days after ingestion, and recovered fully after three days.

TABLE I—*Age and sex of patients reported to be suffering from overdose of Lomotil*

Age:	⩽5 years	6–12 years	⩾12 years	Total
Males	34	1	5	40
Females	30	3	6	39
Not known	7	0	0	7
Total	71	4	11	86

TABLE II—*Relation between age and symptoms associated with overdose due to Lomotil (in cases where adequate follow-up information was received)*

Age (years):	⩽5	6–12	⩾12	Total
Group 1	21	0	1	22
Group 2	16	2	1	19
Group 3	6	1	0	7
Total	43	3	2	48

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Discussion

These results show that Lomotil ingestion is a cause of serious poisoning in young children, especially those aged under 5. It is always hard to assess the dose in patients suffering from poisoning, but it seems that young children may develop pronounced symptoms after taking only one to five tablets.

Doctors should be aware of this risk and warn parents, particularly about the hazards of leaving tablets within reach of children. Safety packaging would seem to be imperative. A further deterrent might be to increase the tablet size, currently 5·6 mm in diameter and 2·5 mm thick, to reduce the likelihood of a child swallowing many at one time. A person suspected of taking an overdose of Lomotil should be admitted to hospital and observed for at least 24 hours, as the atropine may delay the onset of symptoms. Treatment should consist of intensive supportive treatment, and, if necessary, administration of a narcotic antagonist such as naloxone.

We thank those doctors whose co-operation, by contributing information, made this survey possible.

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Collaborative care of hypertensives, using a shared record

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Summary

A shared hospital-GP record for control of hypertension was studied in a sample of 60 patients. Over 80% of patients brought the record to hospital duly completed. Two-thirds of GPs, and the hospital staff, assessed the record as a useful aid in the care of hypertensives. It is still employed enthusiastically, three years after its introduction.

Introduction

Union of the three branches of the NHS in April 1974 was hailed as an opportunity for integrating medical care, but progress has been unimpressive. At a conference held under the auspices of the Royal College of Physicians of Edinburgh in 1976 to stimulate new approaches[1] there was general agreement that patients with severe hypertension were ideal subjects for integrated care. The general practitioner would take most of the responsibility for controlling treatment, while the hospital staff did most of the time-consuming physical and laboratory investigations at long intervals. At the same conference, however, an experiment in shared hospital-GP care of diabetes was reported as having had only limited success, despite careful planning. Fears were expressed that shared care of hypertensives would fare no better and that the portable record would be lost, forgotten, badly completed, or illegible. We therefore report our experience in collaborative care of hypertensives.

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Methods

CLINIC PRACTICE

For the past three years essential hypertensives without complications have been returned to the care of GPs after initial investigation and control of hypertension. Those with grade 3 or 4 retinopathy, cardiac failure, renal damage, and primary renal disease have attended hospital for long-term follow-up at intervals determined by their primary disease and complications. They are issued with a blood pressure record (see figure), which they carry to the hospital and the surgery and on which all BP readings are recorded. The information

Name..... Record Number.....

Date	Time	Hours since last dose	Blood pressure				Drugs and dosage			
			Lying	Sitting	Standing	Exercise				

Hypertensive record used in survey.