

ELIMINATION OF INTERFERENCE DUE TO ASCORBIC ACID WHEN DETECTING PARACETAMOL IN URINE

SIR,—Several methods for detecting paracetamol (acetaminophen) or its metabolites in blood and urine have been developed. While investigating an indophenol method¹ I found that some urine samples known to contain paracetamol failed to give a positive reaction. This was traced to the presence in the urine of large quantities of ascorbic acid; ingestion of this compound have been stimulated by suggestions that vitamin C protects against the common cold. Oxidation of ascorbic acid by sodium metaperiodate eliminates interference due to ascorbic acid when the indophenol reaction is used.

The reagents required are 1% aqueous *o*-cresol, 4 mol/l ammonium hydroxide, 5% sodium metaperiodate (prepared each week and refrigerated), and concentrated hydrochloric acid. Put 5 drops of urine in a test tube with 0.1 ml of acid and an anti-bump granule. Boil for 15 s, cool, and add 1 ml of *o*-cresol and 2 ml of ammonium hydroxide followed by 0.2 ml metaperiodate. An intense blue colour is positive for paracetamol. The metaperiodate eliminates the interference caused by up to 1 g/dl of ascorbic acid in the urine.

Interference in this method might have been predicted since an indophenol method is used for estimating urinary vitamin C.

Department of Chemical Pathology,
Charing Cross Hospital Medical School,
London W6 8RF

J. SWALE

HEALTH AND SAFETY INSPECTIONS

SIR,—You report (Oct. 15, p. 834) that the Health and Safety Commission expects to achieve improvement in health and safety at work as much by cooperation and persuasion as by regulations and legal sanctions and that the appointment of safety representatives and safety committees at places of work (compulsory from October, 1978) should enable employees to join with managements in identifying and eliminating hazards, with inspectors acting as "vital information channels". May I comment on the practice which inspectors are instructed to follow as explained to me by two different inspectors.

After an inspector has inspected a workplace he sends a statement of the defects he has found to the manager, with references to the regulations covering the defects. A copy is sent to the employees' representatives (now chosen by the inspector, later they will be safety representatives on the safety committees). I asked why these reports were confined to statements about defects without a single word of commendation about what might have seemed commendable, for instance that the workplace was clean and well-lit. The reply was that this was not possible. One reason given was that, although what the inspector saw might have been commendable, conditions 15 min before his arrival or 15 min after his departure might have been different. Another reason given was that the inspectors were Civil Servants.

I can imagine nothing worse for employee-management relationships than a steady stream of adverse statements from a health-and-safety inspector building up over the years in the files of safety representatives without a single statement favourable to management, even when deserved. To call this practice a "vital information channel" is as good an example of Orwell's newspeak as one could hope to find. The practice I have outlined seems to elevate legal notions above cooperation and persuasion, in direct contrast with the Health and Safety Commission's expectations.

Heath Barrows,
Boars Hill,
Oxford

R. H. MOLE

MANAGEMENT OF WHOOPING-COUGH

SIR,—Dr Ware (Oct. 22, p. 872) says that he has searched the literature in vain for a mention of the use of antitussive drugs in whooping-cough. If he searches as far as p. 747 in the second edition of A. B. Christie's *Infectious Diseases*—and this book is far more worthy of the term literature than much of what is overgenerously referred to as such—he will find a paragraph which states clearly why such drugs are inadvisable. "... too big a dose will lessen the number of spasms but make the child so drowsy that he will not eat, yet often the drug has no effect until such a state is reached..." It sounds as though Dr Christie knows what he is talking about. Carry on vaccinating, Dr Ware.

30 Endcliffe Crescent,
Sheffield S10 3ED

S. L. BARLEY

SIR,—Dr Ware reviews most of our problems, except one—where do we nurse the young infant with whooping-cough? He needs isolation but continuous supervision. The cubicle with a "baby alarm" is a part solution. Our answer is different. We use the adult intensive-care unit (I.C.U.). This provides isolation from susceptible infants, 24 h watch, quietness, and immediate access to efficient apparatus. Our I.C.U. have done this for years—without qualm and with great skill and excellent results. The staff enjoy it too; when else can they expect their patients to live another 65 years?

Pædiatric Department,
Royal Albert Edward Infirmary,
Wigan

R. M. FORRESTER

SIR,—I entirely agree with Dr Ware that antibiotics are valuable in whooping-cough, but not that ampicillin is ineffective. In vitro *Bordetella pertussis* is killed by ampicillin in high concentration, and, since it is a relatively safe drug, I have treated babies and young children with whooping-cough with large doses (1–2 g twice a day by intramuscular injection with hyalase over 7 days). Over twelve years in two hospitals none of these patients has caused any concern because of paroxysms or spasm after the first night, and their subsequent course has been smooth. I give phenobarbitone too but I am sure it is the ampicillin which helps most.

Breamore Marsh,
Fordingbridge,
Hampshire

T. H. HUGHES-DAVIES

SIR,—Dr Ware makes no mention of salbutamol. In view of the excellent results reported by Pavesio and Ponzzone¹ this drug merits further investigation.

Ruchill Hospital,
Glasgow G20 9NB

H. G. EASTON

TRISOMY CLUSTERS

SIR,—We read with interest the report by Dr Warburton and her colleagues (July 23, p. 201) of a cluster of trisomic abortuses in New York City after conceptions between September, 1976, and January, 1977. We believe this to be confirmation of our survey of 40 000 consecutive births in two hospitals in Denver, Colorado from 1964 to 1974.² We found a clustering of X-chromosomal aneuploidy in babies born during the six-month period May–October (conceived August–January) when compared with those born between November and April. A similar distribution of births was found for trisomy 21. Warburton et al. do not report which chromosomes were involved in the trisomies, but we presume they were predo-

1. Pavesio, D., Ponzzone, A. *Lancet*, 1977, i, 150.

2. Goad, W. B., Robinson, A., Puck, T. T. *Am. J. hum. Genet.* 1976, 28, 62.