

ingestion and treatment increased beyond eight hours, and treatment after 15 hours was ineffective. The importance of the critical ingestion-treatment interval is sometimes not appreciated, and conflicting claims have been made. Douglas *et al*¹⁴ believed that cysteamine was of no definite advantage whether given before or after nine hours, while Smith *et al*⁸ concluded that it might prevent further liver damage when given up to 72 hours after ingestion of paracetamol.

Our use of patients given supportive treatment as historical controls was not ideal, but to withhold specific treatment in clinical trials would be unethical. Our results suggest that in the doses used acetylcysteine is more effective than cysteamine and methionine. Methionine seemed to be the least effective. Despite administration within 10 hours, severe liver damage occurred in 20% of our patients and in 4-10% of patients given oral methionine in other studies.^{7 15}

Oral acetylcysteine has been used for paracetamol poisoning in the USA,^{9 10 16} but severe liver damage occurred in 17% of 49 patients treated within 10 hours despite the use of heroic doses (1330 mg/kg given over three days).¹⁰ Acetylcysteine is apparently more effective when given intravenously than by mouth. This is not surprising, since in our experience most severely poisoned patients develop early nausea and vomiting, making oral treatment impracticable. In any event, absorption is likely to be delayed or incomplete. Frequent vomiting has been described with oral methionine,¹⁷ and in one study vomiting apparently occurred in all 416 patients given oral acetylcysteine.¹⁰ There seems to be no place for oral treatment of severe paracetamol poisoning when effective intravenous treatment is available.

Cysteamine invariably causes distressing side effects,^{2 3 6-8 14} and methionine may be toxic.^{3 7 18} Methionine is contraindicated in severe liver disease and may contribute to encephalopathy in paracetamol poisoning.¹⁹ In contrast, acetylcysteine was noticeably free of adverse effects and on these grounds alone is preferable to cysteamine and methionine. Furthermore, acetylcysteine is readily available, and a special intravenous preparation (Parvolex, Duncan, Flockhart) is now marketed in the UK for paracetamol poisoning.

The following plan of management is proposed for paracetamol poisoning in adults. On admission blood should be taken for emergency estimation of the plasma paracetamol concentration, remembering that values obtained before four hours after ingestion may not be reliable because of the possibility of continuing absorption. Non-specific analytical methods such as those described by Wilkinson²⁰ and Welch and Conney²¹ must not be used, since they may overestimate values by up to 700%.²² Gastric lavage should be performed on patients admitted within four hours of ingestion and on unconscious patients.

Intravenous acetylcysteine is indicated in patients with plasma paracetamol concentrations above the treatment line, provided that treatment is started within 15 hours of ingestion. Patients who are thought to have taken over 7.5 g paracetamol more than eight hours previously, however, should be treated immediately without waiting for the plasma paracetamol result. Although treatment with acetylcysteine between 15 and 24 hours is ineffective, it probably does no harm and should not be withheld if the time of ingestion is in doubt. Severe liver damage and renal failure may occur with plasma paracetamol concentrations below the present treatment line,⁵ and in view of the safety of acetylcysteine a good case can be made for lowering the line to 150 mg/l at four hours and 25 mg/l at 15 hours.

We acknowledge the help given by the medical and nursing staff of the Regional Poisoning Treatment Centre and thank Mrs I Darrien, Mrs L Brown, and the staff of the department of clinical chemistry for technical work. We also thank Dr T J Fish, of Duncan, Flockhart, for supplying acetylcysteine. This work was supported by grants from the Scottish Hospitals Endowment Research Trust, the Scottish Home and Health Department, and McNeil Consumer Products Co, Fort Washington, Pennsylvania, USA.

References

- Mitchell, J R, *et al*, *Clinical Pharmacology and Therapeutics*, 1974, **16**, 676.
- Prescott, L F, *et al*, *Lancet*, 1974, **1**, 588.
- Prescott, L F, *et al*, *Lancet*, 1976, **2**, 109.
- Prescott, L F, *et al*, *Lancet*, 1977, **2**, 432.
- Prescott, L F, *Health Bulletin*, 1978, **36**, 204.
- Hughes, R D, *et al*, *British Medical Journal*, 1977, **2**, 1395.
- Crome, P, *et al*, *Lancet*, 1976, **2**, 829.
- Smith, J M, *et al*, *British Medical Journal*, 1978, **1**, 331.
- Carloss, H, *et al*, *Southern Medical Journal*, 1978, **71**, 906.
- Rumack, B H, and Peterson, R G, *Pediatrics*, 1978, **62**, suppl, p 898.
- Gibson, P F, *Lancet*, 1972, **2**, 607.
- Prescott, L F, *Journal of Pharmacy and Pharmacology*, 1971, **23**, 807.
- Adriaenssens, P I, and Prescott, L F, *British Journal of Clinical Pharmacology*, 1978, **6**, 87.
- Douglas, A P, Hamlyn, A N, and James, O, *Lancet*, 1976, **1**, 11.
- Meredith, T J, *et al*, *British Medical Journal*, 1978, **1**, 1215.
- Lyons, L, Studdiford, J S, and Sommaripa, A M, *New England Journal of Medicine*, 1977, **296**, 174.
- Fitzgerald, G A, and Drury, M I, *Journal of the Irish Medical Association*, 1977, **70**, 448.
- Hardwick, D F, *et al*, *Metabolism*, 1970, **19**, 381.
- Meredith, T J, Newman, B, and Goulding, R, *British Medical Journal*, 1978, **2**, 478.
- Wilkinson, G S, *Annals of Clinical Biochemistry*, 1976, **13**, 435.
- Welch, R M, and Conney, A H, *Clinical Chemistry*, 1965, **11**, 1064.
- Stewart, M J, *et al*, *Annals of Clinical Biochemistry*, 1979, **16**, 89.

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Vancouver style

All manuscripts submitted to the *BMJ* from now on should conform to the uniform requirements for manuscripts submitted to biomedical journals (known as the Vancouver style).

The *BMJ*, together with many other international biomedical journals, has agreed to accept articles prepared in accordance with the Vancouver style and will be introducing the system from January 1980. The style (described in full in *BMJ*, 24 February, p 532) is intended to standardise requirements for authors and covers text format, presentation of methods and results, use of SI units, and the form of tables and illustrations. All the participating journals have also agreed to introduce a standard form of references.

In future references to papers submitted to the *BMJ* should include: the names of all authors if there are fewer than seven or, if there are more, the first three followed by *et al*; the title of journal articles or book chapters; the titles of journals abbreviated

according to the style of *Index Medicus*; and the first and final page numbers of the article or chapter.

Examples of common forms of references are:

- International Steering Committee of Medical Editors. Uniform requirements for manuscripts submitted to biomedical journals. *Br Med J* 1979; **1**:532-5.
- Soter NA, Wasserman SI, Austen KF. Cold urticaria: release into the circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. *N Engl J Med* 1976; **294**:687-90.
- Weinstein L, Swartz MN. Pathogenic properties of invading microorganisms. In: Sodeman WA Jr, Sodeman WA, eds. *Pathologic physiology: mechanisms of disease*. Philadelphia: W B Saunders, 1974:457-72.

Up to the beginning of October some 100 journals had agreed to accept articles in the Vancouver style, and a full list will be printed early in 1980.

COMING EVENTS

Royal College of Psychiatrists—Autumn quarterly meeting, 15-16 November, London. Details from the secretary to the college, 17 Belgrave Square, London SW1X 8PG. (Tel 01-235 2351-5.)

"Dietary Fibre: what is the future?"—Symposium, 27 November, London. Details from Dr I McLean Baird, Postgraduate Medical Centre, West Middlesex Hospital, Twickenham Road, Isleworth, Middx TW7 6AF. (Tel 01-560 2121.)

Institute of Urology—Uro-radiology weekend, 7-8 December, London. For details see classified advertisements.

Institute of Physics—Meeting on "Data collection in electron microscopy and analysis," 25 March 1980, London. Details from the meetings officer of the institute, 47 Belgrave Square, London SW1X 8QX.

"Drug receptors and their effectors"—Symposium, 31 March-1 April, London. Details from the administrative secretary, Mrs J Kruger, c/o Department of Pharmacology, University College London, London WC1E 6BT.

Royal College of Radiologists—Details and copies of the 1979-80 calendar are now available from the college, 38 Portland Place, London W1N 3DG. (Tel 01-636 4432-3.)

Society of Chemical Industry Microbiology, Fermentation and Enzyme Technology Group—Details and copies of the 1979-80 programmes are now available from the group, 14-15 Belgrave Square, London SW1X 8PS. (Tel 01-235 3681.)

SOCIETIES AND LECTURES

For attending lectures marked * a fee is charged or a ticket is required. Applications should be made first to the institutions concerned.

Monday, 5 November

INSTITUTE OF DERMATOLOGY—4.30 pm, Professor Ruth Bowden: Embryology of human skin.
ROYAL COLLEGE OF PHYSICIANS OF LONDON—5 pm, Lumléan lecture by Sir John Walton: Muscle disease—some new perspectives.

Tuesday, 6 November

INSTITUTE OF DERMATOLOGY—4.30 pm, Dr R A J Eady: The ultrastructure of the epidermis.
ROYAL COLLEGE OF PHYSICIANS OF LONDON—5 pm, Ernestine Henry lecture by Dr P C Elmes: The relative importance of cigarette smoking in occupational lung disease.
UNIVERSITY COLLEGE LONDON—1.20 pm, Professor C G Clark: A wee touch of indigestion.

Wednesday, 7 November

ASSURANCE MEDICAL SOCIETY—At Medical Society of London, 5 pm, Dr Kenneth MacLean: Personal views on the rating of certain impaired lives.
INSTITUTE OF NEUROLOGY—Sandoz Foundation advanced lectures, 6 pm, Professor L W Duchon: Experimental models of muscle disease. 7 pm, Dr E M Brett: The floppy baby.
INSTITUTE OF ORTHOPAEDICS—6 pm, Mr R Sanders: The place of microvascular surgery in trauma to the limbs. 7 pm, Mr E L Trickey: Cervical spine injury.
INSTITUTE OF PSYCHIATRY—5.30 pm, Professor Neil Kessel: Genius and madness. The enterprise of pathology.
ROYAL COLLEGE OF PHYSICIANS OF LONDON—5 pm, Tudor Edwards lecture by Professor S J G Semple: The chemical control of breathing in health and disease.
UNIVERSITY OF OXFORD—At John Radcliffe Hospital, 5 pm, Dr Howard Thomas: Hepatitis B virus infection: mechanisms and treatment.

Thursday, 8 November

QUEEN CHARLOTTE'S MATERNITY HOSPITAL—12-15 pm, Sheila Kitinger: Support of mothers and their babies in the first week of life: mothers' experiences.
ROYAL COLLEGE OF PHYSICIANS OF LONDON—5 pm, John Thornton Ingram lecture by Dr W J Cunliffe: A clinical and computerised study of acne therapy.
ROYAL COLLEGE OF SURGEONS OF ENGLAND—5 pm, Hunterian lecture by Professor J S P Lumley: Cerebral revascularisation in stroke prophylaxis. At Royal Society of Medicine, 5 pm, Edridge-Green lecture by Dr H Ikeda: Visual acuity: its development and amblyopia.
ST MARY'S HOSPITAL MEDICAL SCHOOL—5.15 pm, Aleck Bourne lecture by Dr O A N Husain: Recent advances in gynaecological cytology.

Thursday, 8 November

WEST OF SCOTLAND COMMITTEE FOR POSTGRADUATE MEDICAL EDUCATION CENTRE FOR MEDICAL WOMEN—9.30 am, Dr G Watkinson: Modern concepts in the treatment of inflammatory bowel disease.

Friday, 9 November

KENT POSTGRADUATE MEDICAL CENTRE AT CANTERBURY—8.30 pm, annual Pfizer lecture by Dr R S Williams: Recent advances in the treatment of liver disease.

UNIVERSITY OF LIVERPOOL—At Royal Liverpool Hospital, 5 pm, science, and practice of orthopaedic surgery lecture by Professor J Williamson: Bone diseases in the elderly.

Saturday, 10 November

UNIVERSITY OF LIVERPOOL—At Royal Liverpool Hospital, 9 am, science and practice of orthopaedic surgery lecture by Professor J Williamson: Orthopaedic-geriatric units.

BMA NOTICES

Central Meetings

	NOVEMBER
14 Wed	General Purposes Subcommittee (CCHMS), 2 pm.
15 Thurs	General Medical Services Committee, 10 am.
15 Thurs	Negotiating Subcommittee (CCHMS), 10 am.
15 Thurs	Consultant Radiologists Group Committee, 2 pm.
21 Wed	Mental Health Group Committee, 9.30 am.
21 Wed	Finance and General Purposes Committee, 10 am.
28 Wed	BMA Council , 10 am.
29 Thurs	
and	
30 Fri	Training course for newly appointed honorary secretaries.

Division Meetings

Members proposing to attend meetings marked * are asked to notify in advance the honorary secretary concerned.

Coventry—At Coventry and Warwickshire Postgraduate Centre, Tuesday, 6 November, 7.30 pm, dinner/lecture, speaker Dr B McD Duxbury: "Doctors on the move."*

Dewsbury—At Staincliffe General Hospital, Wednesday, 7 November, 7.30 pm, annual clinical meeting in conjunction with the Postgraduate Centre.

Dukeries—At Mansfield General Hospital, Wednesday, 7 November, 7.15 for 8.15 pm. buffet supper followed by Professor Alan Usher: "Forensic pathology."*

Harrogate—At 63 Cornwall Road, Saturday, 10 November, 8 pm, informal supper party.*

North Warwickshire—At George Eliot Hospital, Tuesday, 6 November, 8 pm, social evening.* (Guests are invited.)

Rochdale—At Birchill Hospital, Tuesday, 6 November, 8 pm, business meeting.

Rugby—At Hospital of St Cross, Thursday, 8 November, 12.30 or 12.50 pm, working buffet lunch.*

Solihull—At Greswolde Arms Hotel, Thursday, 8 November, 7.15 pm, joint meeting with the ladies section of the Royal Medical Benevolent Fund.*

South Bedfordshire—At Durocrest Hotel, Luton, Friday, 9 November, 8 pm, annual dinner.* (Guests are invited.)

Swansea and West Glamorgan—At Top Rank Suite, Swansea, Friday, 9 November, 7.30 pm, annual ball.*

Waltham Forest—At Whipps Cross Hospital, Thursday, 7 November, 8.30 pm, Professor Desmond Pond: "Does preventive psychiatry exist?"* (Preceded by buffet supper. 7.30 pm.)*

West Derbyshire—At Barn Rest Restaurant, Bakewell, Saturday, 3 November, 7.30 for 8 pm, annual dinner, speaker Professor Eric Wilkes.*

Regional Meetings

Mersey Regional Committee for Community Medicine—At Liverpool Medical Institution, Wednesday, 7 November, 5 pm.

North-west Regional Council—At Boyd House, Manchester, Wednesday, 7 November, 4 pm.

UNIVERSITIES AND COLLEGES

MANCHESTER

MD—P E T Isaacs.

BRISTOL

MD—C M Asplin, C J Roberts.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

At a meeting of the council of the college on 15 October, the following were admitted to the Fellowship: M F Y M Abdelbaki, A M Abdelkader, H S Abou-Zeid, M A Abrahams, O P Agrawal, M R Ahmed, D J M Al-Khalifa, A M Al-Layla, S Ankaiah, A D Atkins, A R Bacha, P S Baines, N Z Bakheit, Raka Banerjee, G C Bannister, M O Bennett, B G Best, K I Bickerstaff, K A Boateng, L H Boobis, P L Brown, S S S Buisaidy, S K Chaku, K-M Chan, C K Huat, K H Choong, C R Choudhury, S A Cohen, M P Collins, C M Court-Brown, G H Creasey, A C Crosby, R J Cuschieri, V Deshpande, P K Dhar, G H Dibsy, I E H El-Kharib, A M A El-Swaiss, F O Esehie, T S M Fahim, F Chinn-Wan, D M A Francis, N T McL Galloway, S S Geeranavar, A Ghosh, B Ghosh, I G Gunn, C N Hall,

Instructions to authors

The following are the minimum requirements for manuscripts submitted for publication.

A stamped addressed envelope or an international reply coupon *must* accompany the manuscript if acknowledgment of its receipt is desired.

(1) **Typing** should be on one side of the paper, with double or triple spacing between the lines and 5-cm margins at the top and left-hand side of the sheet.

(2) **Two copies** (or preferably three) should be submitted.

(3) **Spelling** should conform to that of *Chambers Twentieth Century Dictionary*.

(4) **References** must be in the Vancouver style (*BMJ*, 24 February, p 532) and their accuracy checked before submission.

(5) **SI units** are used for scientific measurements. In the text they should be followed by traditional units in parentheses. In tables and illustrations values are given only in SI units, but a conversion factor must be supplied. For general guidance on the International System of Units, and some useful conversion factors, see *The SI for the Health Professions* (WHO, 1977).

(6) **Authors** should give their names and initials, their current appointments, and not more than two degrees or diplomas. Each author must sign the covering letter as evidence of consent to publication.

(7) **Letters to the Editor** submitted for publication must be signed personally by all the authors.

(8) **Acknowledgments** will *not* be sent unless a stamped addressed envelope or an international reply coupon is enclosed.

(9) **Detailed instructions** are given in the *BMJ* dated 6 January 1979 (p 6).

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At the annual meeting of fellows held on 17 October the following constitution of council was confirmed—Professor F John Gillingham (president); Mr R J M McCormack, Sir James Fraser (vice-presidents); Mr A C B Dean (secretary); Dr A G D Maran (treasurer); Mr J Cook, Professor H L Duthie, Mr P Edmund, Professor A P M Forrest, Mr R Myles Gibson, Mr A A Gunn, Mr D W Lamb, Professor J Lister, Mr I F MacLaren, Mr T J McNair, Mr J A S Macpherson, Mr A D Roy, Mr W A T Robb, Mr J W W Thomson, Mr W F Walker (council); Professor A W Wilkinson (council ex officio—immediate past president); Professor W D MacLennan (convener of the dental council).

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