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H. H. JOHNSON
Department of Materials Science and Engineering, College of Engineering, Cornell University, Ithaca, New York

Drug Abuse

The letter from Michael M. Baden (29 Sept. 1972, p. 1152) which is critical of the excellent summary by Thomas H. Maugh of research on narcotic antagonists (Research News, 21 July, p. 241) is itself in need of criticism. Baden may be correct in his two points that (i) abuse of methadone and overdose deaths more frequently result from oral administration than from injection and (ii) the amount of paregoric being abused is only a very small fraction of the total amount being consumed. However, Baden does not appreciate the contribution of parenteral abuse to problems associated with present oral administration nor why a more useful parenteral deterrent is essential.

The effect of methadone, when it is taken parenterally by addicts, is either indistinguishable from that of heroin (1) or may indeed be preferred to that of heroin (2). Accordingly, attempts have been made to prevent parenteral methadone abuse. Patients who have take-home privileges are provided either with solutions (for example, Tang) or with some solid dosage (such as the Disket), which, because of irritating properties when it is directly ingested orally, must be dissolved before use. These forms of dosage, which have been designed to prevent parenteral abuse, unfortunately have not accomplished their objective, as they are either directly injectable (3) or can readily be prepared for injection (2, 4). Worse, however, is that their use has led to many deaths from methadone overdose. When given methadone in solution, the patient is not told the concentration in the mixture, nor is the bottle labeled. A solution containing 40 milligrams procured one day by a street addict may provide satisfaction and relief from withdrawal effects. On another day, a solution of identical appearance but containing 100 milligrams may be lethal. Tang solutions or Disket solutions are pleasant-smelling and attractive-looking. Young children drink them “eagerly” with disastrous results (5). Naloxone combined with methadone in a truly non-filterable dosage form would prevent parenteral abuse, eliminate the need for all liquid preparations, and undoubtedly result in fewer lethal doses administered by both oral and parenteral means.

The paregoric question also needs to be clarified. Effective 4 June 1972, a prescription was required for paregoric in all 50 states (6). The reason, as described in the Federal Register (7), is that “abuse of paregoric by addicts who process it into a form for intravenous administration is well known and well documented in the medical literature ... it is in the public interest for paregoric to be restricted to prescription sales.” The housewife who previously obtained a few cents worth of the popular old remedy from her corner pharmacy must now incur the additional expense and trouble of an appointment with a physician and a prescription for the drug—all because of a small degree of addict abuse. Both the Food and Drug Administration and the Bureau of Narcotics and Dangerous Drugs have expressed interest in returning paregoric to over-the-counter status if abuse can be prevented. As little as 1 milligram of naloxone in each 100 milliliters of paregoric can make such abuse a thing of the past.

IRWIN J. PACHTER
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1965-67  Electronics Engineer, General Dynamics/Astronautics
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It should be remembered that the atomic scientists who in the last months of the war were perhaps best able to grasp the tragic implications of the decision to use the bomb were divided on it too. Given the pressures of that time and also Truman's personality and experience—he was after all an ex-AEF battery commander who had seen a lot of blood shed in a final offensive in France—his decision to use the bomb was probably inevitable. Whether he was right or wrong became an abstraction once the irretrievable moment at Hiroshima was past. It was equally inevitable that the decision would cast a shadow on his reputation.

As for the postwar record, the revisionists now say that Truman was the architect of an imperialistic system aimed at economic domination which led the United States ultimately to the ordeal of the Vietnam war. Truman’s partisans claim that the use of American military and economic power made it possible to survive a period of Soviet expansionism and the turmoil of decolonization without a nuclear war and to reach a point when changed power relations have bettered the prospect for stability in international relations. Truman himself could probably appreciate the irony of how his critics changed with the times. When he was in office, the country was bitterly divided by the issues raised by Senator Joseph McCarthy and Truman’s Administration was under ceaseless political attack for being “soft on Communism.” In retrospect, the revisionists appear to be blaming him for being too hard on Communism.

Truman's death 20 years after he left office came at a time when the premises of diplomacy established during his presidency seem to be altering significantly. At the same time, relations between government and science are also changing. As President, Truman accepted the principle that world leadership in science was a guarantee of national security and helped to make it part of the conventional wisdom of the time. This principle opened the way to a period of great achievement—particularly in basic research—and of a considerable measure of affluence and self-determination for the scientific community.

In recent years the growth rate of science has been curbed and emphasis increased on applied science through cuts and shifts in funds. It now appears that President Nixon's forthcoming budget will prescribe a major realignment of scientific efforts, mainly through more cutbacks, and there are indications that this will be accompanied by a redesign of the decision-making machinery for science. So it seems that with less hyperbole than usual it can be said that Truman's death, by coincidence, marks the end of the era which he did so much to shape.—JOHN WALSH

APPOINTMENTS

Clair E. Cox, II, professor of medicine, Wake Forest University, to chairman, urology department, College of Medicine, University of Tennessee. . . . Luke N. Zaccaro, professor of mathematics, Worcester Polytechnic Institute, to chairman, mathematics department, Youngstown State University. . . . Robert W. Mulligan, provost, Xavier University, to president of the university. . . . Steven Muller, president, Johns Hopkins University, also to president, Johns Hopkins Hospital. . . . Clarence M. Tarzwell, director, National Marine Water Quality Laboratory, to science adviser, Environmental Protection Agency. . . . At Auburn University: Chester C. Carroll, chairman, electrical engineering department, to vice president for research and Taylor D. Littleton, dean of undergraduate studies, to vice president for academic affairs. . . . Raleigh A. Suarez, dean, School of Humanities, McNeese State University, to vice president of academic affairs at the university. . . . Carleton B. Chapman, dean, Medical School, and vice president of Dartmouth College, to vice president, Commonwealth Fund. . . . Lawrence Harvill, provost, University of Redlands, to vice president for academic affairs at the university. . . . Valmore R. Goines, dean of academic services, Eastern Michigan University, to vice president for academic affairs, Virginia State College. . . . Donald W. Robinson, dean of education, Youngstown State University, to dean of education, Oklahoma State University. . . . Frederick G. Adams, presidential assistant for allied health research, University of Connecticut, to dean, School of Allied Health Professions at the university. . . . Fred Esser, professor of education, North-west Missouri State University, to dean of education at the university. . . . Theodore W. Rall, professor of pharmacology, Case Western Reserve School of Medicine, to director, pharmacology department at the medical school. . . . John F. Schafer, head, plant pathology department, Kansas State University, to chairman, plant pathology department, Washington State University. . . . Hong S. Min, professor of biology, Georgia Institute of Technology, to head, zoology department, Clemson University. . . . James S. Meditch, associate professor, School of Engineering, University of California, Irvine, to chairman, systems engineering and operations research group at the school. . . . J. L. Wilhm, professor of zoology, Oklahoma State University, Stillwater, to head, zoology department at the university. . . . C. Philip Larson, Jr., professor of anesthesia, University of California, San Francisco, to chairman, anesthesia department, Stanford University School of Medicine. . . . Theodore Axenrod, professor of chemistry, City College, City University of New York, to chairman, chemistry department at the college. . . . Peter E. Thompson, professor of zoology, University of Georgia, to head, zoology department at the university. . . . Robert C. Stephenson, director, Ohio State Research Foundation, to director, Center for Marine Resources, Texas A&M University. . . . Lewis H. Kuller, professor of epidemiology, Johns Hopkins University, to chairman, epidemiology and microbiology department, University of Pittsburgh. . . . James Crum, professor of chemistry, California State College, San Bernardo, to dean, School of Natural Sciences at the college. . . . Charles B. Fancher, dean of faculty, Tennessee State University, to vice president for academic affairs at the university. . . . Jack L. Titus, associate professor of pathology, Mayo Graduate School, to chairman, pathology department, Baylor College of Medicine. . . . Thomas Detre, professor of psychiatry, Yale University, to chairman, psychiatry department, University of Pittsburgh. . . . Frederick H. Carpenter, professor of biochemistry, University of California, Berkeley, to dean of biological sciences at the university.

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R. E. DAVIES
Department of Animal Biology and Graduate Group on Molecular Biology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia

Books Received


(Continued on page 309)