COMMENTS

This study was carried out at the request of the California State Legislature because of concern with potential hazards to the public health from chloramphenicol and other antibiotic drugs. Prior to this study the evidence of an association between chloramphenicol and aplastic anemia consisted of clinical case reports, the Food and Drug Administration surveys, the American Medical Association's Blood Dyscrasia Registry, and pathological findings of suppression of bone marrow function by chloramphenicol. Concomitant with this study a statistical investigation was carried out; a significant statistical correlation was found between the volume of chloramphenicol sales and the number of reported aplastic anemia deaths. This study, based on a random sample of reported aplastic anemia deaths, showed a more frequent association with chloramphenicol than with any other drug or agent with a risk of aplastic anemia of at least 1:60,000 persons treated. No single piece of evidence establishes a definitive link between chloramphenicol and aplastic anemia. However, all findings point in the same direction and, combined, strongly suggest that chloramphenicol is causally related to aplastic anemia.

The study data reveal that during the time period covered by the study, in many instances chloramphenicol was used injudiciously for conditions in which another medication would have been equally effective. Chloramphenicol was rarely used according to the criteria recommended by the American Medical Association's Council on Drugs, the American Academy of Pediatrics, the Food and Drug Administration and many eminent medical authorities.

Since periodic blood counts can not be relied on to detect signs of bone marrow toxicity before irreversible aplastic anemia develops, then judicious use of the drug must be depended on to minimize the toxic effects. Judicious use prohibits it for prophylaxis, for trivial conditions, and for infections in which a less dangerous drug may be equally effective.

SUMMARY

A study of reported aplastic anemia deaths in California indicates that there were at least 30 cases with exposure to chloramphenicol among 138 deaths comprising a random sample of deaths attributed to aplastic anemia during 1957–1961. Exposure to chloramphenicol occurred with greater frequency than exposure to any other single agent. It is conservatively estimated that the risk of fatal aplastic anemia in persons receiving chloramphenicol is 1:60,000; probably the risk is much greater. Examination of the indications for use of chloramphenicol and the controls on its use, as reported in the hospital records of the persons who subsequently died of aplastic anemia, suggests that chloramphenicol was used often for minor conditions where its potential advantage over other means of treatment was dubious.

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CHLORAMPHENICOL

(By Maxwell M. Wintrobe, M.D., College of Medicine, University of Utah, Salt Lake City)

The Registry on Blood Dyscrasias of the American Medical Association began to collect reports of blood dyscrasias associated with consumption of drugs and exposure to various other potentially toxic agents in 1955. By June, 1963, a total of 1,484 reports had been received, chiefly from physicians in the United States. In addition, 550 reports had been gleaned from medical journals published outside the United States, thus providing a total of 2,034 reports. The total number of drugs and chemical substances mentioned in these reports was 463.

In considering the above data it must be recognized that (1) they probably represent only a small fraction of the blood dyscrasias which have occurred in association with exposure to various drugs and chemical substances. Reporting has been voluntary and has not depended even on a systemic or organized cam-