

typhoid and paratyphoid infections, and some would include *Haemophilus influenzae* meningitis. These three conditions accounted for 6.6% of indications in the current series, most of these being from non-US sources. Chloramphenicol is also indicated in certain other serious acute and chronic infections depending on in vitro sensitivities and particular features of a patient's course. The report forms did not request sufficient data for further evaluation in this regard. The drug is inactive against common viral and upper respiratory tract infections, but these conditions accounted for a significant percentage of stated indications in this series. Thus, the most powerful preventive tool available is the use of this agent only for serious infections in which the balance of risks of adverse reactions against the risks of inadequate therapy tend to favor use of this antibiotic over alternative methods of treatment. It should be recognized that the risk of occurrence in any case treated with chloramphenicol is quite slight, but the risk of a fatality in that patient who develops this reaction is great. Some physicians have belittled this complication because they have seen no hint of a blood dyscrasia in the many courses of chloramphenicol therapy which they have directed. One should not be surprised at such an experience, for it is a rare complication; however, this is little consolation to the future patient under such a physician's care who dies of aplasia because chloramphenicol was given when it need not have been.

Most patients develop manifestations of marrow depression after the drug has been stopped, often weeks or months later. It thus appears that monitoring blood counts during therapy would be of little or no value in preventing morbidity and mortality in the majority of cases. However, there is a minority of reactions, usually isolated cytopenias, which may become apparent during therapy and respond to withdrawal of the drug. It is for the recognition of such cases that we recommend the occasional performance of blood counts during chloramphenicol therapy. Under the assumption that an isolated cytopenia represents a basically different and less dangerous type of toxicity. Yunis and Bloomberg do not feel that therapy need be stopped in such cases. We do not agree. No cases in which chloramphenicol was continued after the development of a cytopenia have come to our attention, and one would seem ill advised to continue therapy on the basis of this unproven theory.

SUMMARY AND CONCLUSIONS

This review involves 408 cases of chloramphenicol-associated non-neoplastic depression of one of more blood cell types that were reported directly to the AMA Registry on Blood Dyscrasias or abstracted from the medical literature.

Various quantitative features of the occurrence of this dyscrasia and relationship to drug administration have been delineated.

The dyscrasias noted range from readily reversible, isolated cytopenias occurring during therapy to delayed, progressive aplastic anemia. This range is not considered as necessarily indicative of more than one fundamental type of drug reaction. It is apparent that blood dyscrasias may occur in relation to conventional and even brief courses of therapy, and that signs of such reaction may not be seen until long after the course has been completed. The best approach to prevention thus lies in a sound appraisal of possible benefits and dangers whenever use of this drug is contemplated. The occasional monitoring of blood counts may prove worthwhile in rare cases, but its expected value in the usual case is sufficiently small that one cannot substitute such a practice for good judgment in deciding when the drug should or should not be used.

A more complete bibliography indicating where previously published cases appear, together with other supplemental information, including rules and transformations used to estimate desired parameters from partial data, may be obtained by ordering Document No. 9515 from American Documentation Institute, Library of Congress, Washington, D.C. 20540, remitting \$2.50 for photoprints or \$1.75 for 35-mm microfilm.

GENERIC AND TRADE NAMES OF DRUG

Chloramphenicol—Chloromycetin, Cylphenicol, Tega-Cetin.

Senator NELSON. Our next witness is Dr. Mark H. Lepper.

Doctor, the committee appreciates your coming here today. Your