

treated symptomatically, without any antibacterial agent, specifically, without chloramphenicol.

Senator NELSON. Thank you.

Dr. HOEPRICH. On the other hand, all clinical forms of salmonella infection, regardless of severity, are indication for treatment with chloramphenicol in particularly vulnerable persons. These include:

- (a) The very young.
- (b) The aged.
- (c) Those with serious, underlying diseases that in some way compromise body defenses—neoplastic diseases, metabolic diseases, collagenvascular diseases. There are other examples in this particular category.

Mr. GORDON. Dr. Hoeprich, when you say there are two primary indications, does this mean when chloramphenicol is the drug of first choice?

Dr. HOEPRICH. Chloramphenicol is the drug of choice; yes.

Mr. GORDON. Does that mean first choice, when you say drug of choice?

Dr. HOEPRICH. Yes.

Mr. GORDON. It would be the drug of first choice for salmonella?

Dr. HOEPRICH. In treating the infections, typhoid fever, and those nontyphoidal salmonella infections previously described.

Mr. GORDON. I see. Typhoid fever is a type of salmonella infection?

Dr. HOEPRICH. Yes. It is caused by salmonella typhi.

Mr. GORDON. I see.

Dr. HOEPRICH. Now, there are secondary indications for use of chloramphenicol and these take the form of unusual circumstances:

1. Hypersensitivity that is so severe as to preclude use of another, otherwise preferable agent. For example, the agent of first choice for the treatment of Q fever is tetracycline; if use of tetracycline has provoked a life-threatening hypersensitivity reaction in the patient, chloramphenicol should be substituted. Hypersensitivity to tetracycline is quite unusual, but does occur.

2. Infection caused by a micro-organism proved to be resistant to the action of other antimicrobial agents but susceptible to chloramphenicol. Gram negative enteric bacilli with such characteristics are sometimes cause for infection in humans.

3. Augmented toxic hazards that mitigate against use of other, ordinarily preferable, antimicrobial agents. For example, severe infection in the newly delivered mother may be caused by bacteria that are susceptible to tetracycline. However, tetracycline is peculiarly liable to cause acute liver injury of lethal proportions in such circumstances. Chloramphenicol does not bear this risk and could be used, but only if the micro-organisms involved are not susceptible to other antimicrobics.

Mr. GORDON. In these two primary indications for chloramphenicol, would you be able to give an estimate, just off the top of your head, a rough estimate, as to the number of cases in the United States, say last year, of this type of infection?

Dr. HOEPRICH. Well, of typhoid fever, there is an epidemic surveillance of this sort of thing in this country, so there are accurate figures. My guess is it is a few hundred cases, 200 or 300, perhaps,