

Does that tell you very much?

Dr. LEPPER. No. That is a typical ambiguous statement which tends to foster overuse. In the first place, the vast majority of the respiratory infections are due to viruses and in contrast, I think, Dr. Best's statement chloramphenicol is not active against viruses. Early, it was thought to be useful for some viruses, because we misclassified certain organisms such as the psittacosis agent as a virus but is now recognized to be a very small intracellular bacteria.

Also, a condition known as primary atypical pneumonia which was thought to be a virus infection at the time of the introduction of these agents turns out to be a small free-living bacteria, the mycoplasma. Thus, the initially reported antiviral activity has turned out to be a specific kind of antibacterial activity. We can say quite clearly now there are none of these antibacterials and antibiotics which are effective against known virus, meaning things like polio, common cold virus, influenza virus, the mumps virus, and measles virus, and so forth.

Now, the vast majority of respiratory infections are a virus. Among those which are bacterial, the vast majority, meaning over 95 percent, are bacteria such as the pneumococci and the streptococci. These respond better to penicillin than they do to chloramphenicol. Chloramphenicol is not as good a therapeutic agent in these and the one organism that causes infections in which chloramphenicol is as good or better than penicillin is *Hemophilis influenza*, which is a bacteria that was once thought to cause the disease we now recognize as virus influenza.

This was a mistake and the bacteria, therefore, got its name and has confused everybody since. *Hemophilis influenza* causes ear infections in children, makes up less than 10 percent of all bacterial infections which make up less than 5 percent of all respiratory infections. We are down to 0.5 percent or less that you are talking about.

Except for the possibility, as we mention later, of *Hemophilis influenza* infections in the central nervous system being somewhat better treated by chloramphenicol, there is no evidence that the tetracyclines are not as good as chloramphenicol in the treatment of *Hemophilis* infections and they are less toxic.

Therefore, again, there is no particular respiratory indication. In addition, Ampicillin, which is the newest of the penicillins, and Cephalothin, which is a penicillin-like drug, both have excellent anti-*Hemophilis* activity and also are less toxic.

Hence, in the area of the respiratory infections of the primary type one sees in the community, there is no indication for chloramphenicol. In the hospital we have, because of the use of rather dirty aerosol equipment, engendered a fair number of infections of the lungs due to delivery of the gastrointestinal bacteria to the susceptible lungs. This is known as aerosol-induced pneumonia and is caused by gram negative rods. These are very difficult to treat. They are often in the kind of patients Dr. Best was talking about, severely ill patients, the patient who has otherwise fatal or very severely damaging underlying diseases.

These pneumonias are difficult to treat and you have your choice, often, between a drug like Kanamycin and a drug like chloramphenicol, both of which have considerable toxicity. This choice usually is re-