except possibly dyspnea or a decreased sense of well-being. Peritonitis also can develop without symptoms. I find it very difficult to interpret the complicating set of factors when I see a patient who is obviously not feeling as well, in whom some fever has developed and who has some elevation of leukocytes above that induced by the drug but has no characteristic signs or symptoms of disease. We have not yet had any such complications that have been fatal, but fatal cases of pneumonia and peritonitis have been reported.

The one other point which is disturbing is that we have no indication so far that during the process of medication the underlying disease is healed. There is, to be sure, a tremendous reduction in the clinical and laboratory manifestations of disease, but recurrence is very rapid in almost all cases. As far as we can see there is no indication that normal healing of the process is continuing over the period of hormone administration. Apparently it must begin again when the medications are discontinued. Of course, I don't know whether the same would be true of a disease like that due to beryllium, which differs in so many respects.

DR. HARRIET L. HARDY, Boston: Dr. Kline, what do you think about dosage now that you have heard Dr. Van Ordstrand and Dr. Frawley? Do you have anything you'd like to say?

DR. EDWARD KLINE, Cleveland: First of all, I think there is a choice between cortisone and ACTH. One should determine adrenal cortical response by one of the technics, such as the eosinophil count, the 17-ketosteroid excretion or the sodium-potassium level in the blood, or the sodium-potassium level in the urine after a test dose of the hormone. We did so in the cases which I presented this morning. All of the patients did show a favorable response to ACTH, and therefore we elected to use this preparation. Once we get a remission there is no point in increasing the dose of ACTH. We get no more of a remission and, as a matter of fact, it should be tapered down slowly as the remission continues. This can be graphed from a clinical point of view. When the hormone is withdrawn, the patient apparently goes downhill slowly. It is my feeling that he goes down more slowly if the period of treatment is longer. In the cases that we discussed this morning, the treatment period in each instance was three months. In each case 100 mg. a day was effective. May I further emphasize that it was always given four times a day? With the new preparations that may not be necessary. May I emphasize also that there must be a little tapering-off period so that when we get down to, say, 25 mg. a day, we probably ought to go down to 10 mg. in order to give the adrenal a chance to take over the function that we have been taking care of for it.

DR. HARDY: What do you think about the need for tapering the dose, Dr. Van Ordstrand?

DR. H. S. VAN ORDSTRAND, Cleveland: I feel keenly about that. I was going to ask Dr. Kline how long he wants the 100 mg. a day dose continued?

DR. KLINE: In our experience the period was not the same for every patient, because we kept it up until we obtained the remission. That was usually on the average of one week to two weeks at the maximum.

DR. VAN ORDSTRAND: I think we are all agreeing. We're making an effort to tailor the dosage and the program to the patient's response. I feel keenly about tapering the dosage down.

DR. HARDY: You're in favor of it?

DR. VAN ORDSTRAND: I am in favor of not keeping a high dosage very long.

DR. HARDY: Does not the patient lose his ability to respond because of this tapering?

DR. VAN ORDSTRAND: What we do is to reach the maximum safe tolerance level dose, keep that level for maybe a week, but build up to that level gradually and then decrease gradually. I think Dr. Kline's cases illustrate beautifully that his patients are doing well on this program.

DR. HARDY: Do you agree with that, Dr. Frawley?

DR. FRAWLEY: Yes, in general, we follow this same procedure. We feel that tapering is a very important measure to be followed. I might say, not in beryllium disease but in some other diseases, particularly in lupus and a few rheumatoid conditions, that those in whom we have obtained what might be called "cures" have been those in whom we have used the highest doses and most prolonged treatment. I bring that observation in as a consideration relative to whether one needs to put the adrenal under maximum stimulus in a situation in which there are tremendous amounts of circulating steroids. Those patients whose diseases are very chronic are known to show poor response, and in the few that have had a good remission, we have used large doses over relatively long periods.