

O'Brien, in order to question the role of so-called physical measures in these short-term studies. What about these physical modalities that I have just made reference to? Were such physical measures, as therapeutic exercises, standardized in the 11 clinics that were part of the cooperative clinic study of indomethacin? Actually, there was no mention of these in Dr. Mainland's paper. Again, you must realize that no drug will restore motion unless such impaired and limited joints are put through physical measures to increase ranges of motion, and this is obviously an important adjunctive part of the care of the rheumatoid patient.

I will stress again: Antirheumatic drugs do nothing more than remove joint pain and inflammation, and function is restored through supportive measures, such as physical therapy and so on.

Now, in spite of the results of the various double-blind and controlled trials that you have heard much testimony on, many physicians still have the impression that indomethacin benefits certain patients with rheumatoid arthritis. And, you have heard various statistics quoted, anywhere from 25 to 65 percent of rheumatoid patients may be benefited. But as Dr. Healey, a noted rheumatologist from Oregon, has pointed out in the *Bulletin of Rheumatic Diseases* in December 1967—there may be a subgroup of patients—be it small or large (whatever it is) who may be benefited by indomethacin, a finding that would certainly not be evident if all such patients are included in a general statistical evaluation. What is unique to those patients who do respond to indomethacin? And, to my knowledge, and I quote Dr. Healey, "This hypothesis has not been tested."

Earlier Senator Hatfield had asked about long-term evaluations of indomethacin in various rheumatic disorders. Dr. Charley Smyth, from Denver, Colo., will tell us shortly about his experience with indomethacin in rheumatoid arthritis. I have already submitted to you, Senator Nelson, a reprint of our long-term evaluation of indomethacin in ankylosing spondylitis. This is a form of rheumatoid disease affecting young men. It usually begins between ages 15 and 35. Unlike rheumatoid arthritis, it affects the small (apophyseal) joints of the back—but may also involve the peripheral joints, such as the knee and hip. In many ways, therefore, it is similar to rheumatoid arthritis.

In this indomethacin trial that I have submitted, averaging 33 months, and which is still continuing, actually into its seventh year, there were 28 ankylosing spondylitis patients who received an average daily dosage of 100 milligrams. The response to the drug—using three subjective criteria and three objective criteria, including the erythrocyte sedimentation rate (ESR) as follows: The overall therapeutic rating of all parameters proved to be good in 21 of 28 patients (75 percent), fair in five, and poor in two. (See table I.) Of the 28 patients, three of five patients who had previously been in functional class III improved to class II and two to class I; 21 patients eventually were in the most favorable functional class I, Senator, where only one patient was so rated before the start of indomethacin.

These functional designations are according to the scheme for long-term drug evaluations devised by the American Rheumatism Association, whereby functional class I means the patient is able to carry on all the usual activities of daily living and occupation, and class II means that he may be able to perform in these activities despite joint