

there are probably approximately 15 drugs of the analgesic category and probably about 12 drugs of the narcotic category, that go into the various mixtures that make up this 149.

Senator NELSON. Some of the 149, I take it, were over-the-counter, and some were prescription drugs, is that correct?

Dr. MOERTEL. That is right.

Senator NELSON. Of those that were over-the-counter, how many involve drugs that we all hear of all of the time?

Dr. MOERTEL. The over-the-counter drugs at the present time primarily involve aspirin or acetaminophen. These are the bases for most of the over-the-counter drugs.

To these may be added a number of variations. Caffeine may be added to these, phenacetin is occasionally added, although not too frequently anymore. Occasionally the antihistamines are added for a sedative effect along with an analgesic agent, but almost all of them are based on either a primary aspirin base or primarily an acetaminophen base.

Senator NELSON. Thank you.

Dr. MOERTEL. More than a decade ago, because we were disturbed by our ineptitude in the management of pain of the cancer patient, we initiated at the Mayo Clinic carefully controlled research studies to evaluate the relative effectiveness of the many medications for pain that were available to us.

Our only vested interest was our patients in pain. These studies were not paid for by any drug company.

To insure that the results of these studies could not be in any way influenced by us or by preconceived ideas of our patients, we double-blinded the studies.

By this, I mean that all of the pain medications we gave to the patients looked exactly alike and were identified only by code number, so that neither we nor the patient could tell which was which until the study was over.

The drugs were administered in randomized sequences and we only broke the code when the entire study was complete.

Senator NELSON. So neither the patient nor the prescribing physician knew the drug he was giving?

Dr. MOERTEL. That is correct.

They were entirely blinded both to us and to the patients.

Now, in our first study, which is displayed on the chart on the easel, we looked at analgesic drugs in their pure form, and in this study we compared nine different analgesics as well as placebo or sugar pill.

This study involved close to 600 drug evaluations, and our results with the four drugs that are pertinent to this hearing discussed in this graph.

As you can see in the lower part, even with cancer pain, there will be a substantial number of patients who claim relief with sugar pills.

Darvon use alone showed some advantage over sugar pills, but this was small and it was not statistically significant.

That is the difference which could easily have occurred by accident.

Acetaminophen or APAP, commonly marketed as Tylenol or Datril, showed a much more substantial degree of relief; and surprisingly, leading the pack, two simple aspirin tablets.