

homatropine methylbromide, butabarbital and magnesium hydroxide, and Kolantyl, containing 5 drugs, none of which have any relation to the name of the product.

I have no doubt that physicians would rather use a few drugs of known composition sold under their own names, such as belladonna, phenobarbital, aminophylline, curare and atropine, to 200 different combinations of products sold under names that have little or no relation to the chemical compositions of the drugs.

A few years ago one had available 3 or 4 good antihistaminics, which are as useful today as any of the 130 marketed products, which for the most part contain a variety of mixtures with which physicians cannot hope to become familiar.

There are today over 100 antacid compounds on the market for sale in drugstores, most of which contain combinations of drugs. One of these drugs picked at random is called X. It contains magnesium carbonate, calcium carbonate, colloidal kaolin, tricalcium phosphate, sodium bicarbonate, bismuth subcarbonate, papain and diastase. I do not believe that any good gastroenterologist, any good internist or any good scientist would find use for such a drug. It is like the medieval prescriptions written hundreds of years ago. Such concoctions, of which there are hundreds in drugstores, should have no place in modern therapy.

Fifteen years ago there were only 2 or 3 antibiotics. Today, a dozen or slightly more have been shown to be of special value, and more than 270 different preparations are on the market, many of which are combinations and duplications.

A few decades ago, before medicine became as precise and scientific as it is today, doctors' prescriptions often consisted of 6, 8 or more ingredients, many of which were more or less inert. The prescriptions were written in Latin, and the mystery of the ingredients constituted part of their virtue. Gradually, most of this sort of unscientific and meaningless procedure was abandoned; professors of medicine and of pharmacology taught students to use simple drugs, for precise reasons and for definite periods. Gradually, with the intense developments of chemotherapy, of antibiotic therapy, of antihistaminic therapy, of endocrinologic therapy and of vitamin therapy there has been a mushrooming of drug manufacturers who are in desperate competition. The commercialistic factor has crept into therapeutics to such an extent that physicians everywhere are confused and misled by the literally thousands of drugs increasing in number daily. Dozens of expensive commercial brochures, sample drugs and elegant preparations reach one's office daily and are promptly disposed of in the wastebasket. Many of these modern preparations are mixtures of drugs, some of which are dangerous, some of which are useless, and most of which would be more intelligently given as separate drugs rather than in a shotgun capsule.

There are today over 300 preparations on the American market listed as hematinics designed to increase the red-cell count and hemoglobin. This, of course, is ridiculous. It is well known to every hematologist that not more than 8 or 10 useful drugs are necessary to treat anemia. For the vast majority of cases only 1 of 2 or 3 drugs is necessary or desirable.

Shotgun therapy with multiple drugs usually is unscientific, often means that the doctor does not know what he is doing, invariably is more expensive for the patient and not infrequently results in tragedy both for the patient and for the doctor. An example of such shotgun therapy is the use of drugs containing vitamins, including B₁₂ and folic acid, along with iron, thereby masking bleeding from an otherwise asymptomatic neoplasm until the tumor has become incurable. Many students believe that folic acid administered to patients with pernicious anemia may precipitate an acute and serious exacerbation of the neurologic symptoms.

There are about 450 vitamin preparations currently on the market. Many of these are so-called fortified vitamins. In addition to this, milk, bread, fruit juices and other foods are today fortified with vitamins. Many of the preparations contain a dozen or more items, including copper, iron, cobalt, iodine, phosphorus, calcium, manganese, molybdenum and zinc, in addition to 8 or 10 vitamins.

Every year I am told that Americans buy over the drugstore counters about \$250,000,000 worth of vitamins. It is safe to say that at least \$240,000,000 of this is wasted. No reason whatever exists for the taking of vitamins by any healthy adult American on an adequate diet. There is good reason often for correcting