

November 1992

IN RE: ABRAMS

blood or on whole blood using specific substrates. The most accurate and sensitive methods are the recording titrimetric and Warburg manometric procedures in which the amount of acid is measured stoichiometrically. Both of these methods are of great versatility and can be applied to the study of kinetics of inhibitors or activators and to the study of a variety of other experimental conditions, since rate curves are obtained. The Warburg procedure cannot be used for the study of the effect of pH beyond the range of 7.2-7.7; on the other hand, the titrimetric method can be used to study the entire useful pH range. The titrimetric method is of particular value in the study of the kinetics of the initial phase of the reaction between inhibitor, substrate or activator, and the cholinesterase, since rate curves can be obtained within a period of 2 minutes. Titrimetric methods will become of increasing importance in this field. Errors involved in the determination of cholinesterase include possible contamination of the sample during the collection, failure to centrifuge properly, and inactivation of the enzyme by keeping the blood too long at room temperature. Blood for analysis should be separated into cells and plasma and shipped under refrigeration. The stability of whole blood is increased by drying on filter paper, and blood prepared in this way can be shipped at room temperature. However, the red cell cholinesterase is bound to the paper. Further research is needed to ascertain the effect of tropical conditions on the cholinesterases of blood on paper. There are 139 references in the bibliography.

-- Cond. from author's summary

- 419 Environment and Gastrointestinal Disease. T. Hunt.
Arch. Environmental Health 6, 188-209 (Feb. 1963).

Environmental studies may be expected to throw increasing light upon causative factors in digestive disorders and will be more and more needed as new methods of cultivation, preparation, preservation, and storage of food are developed and new social customs, stresses, and occupational hazards arise. Accurate epidemiological investigations on a world-wide scale provide an outstanding opportunity for increasing our knowledge of digestive diseases. There are 64 references to the subject in the bibliography.

-- Cond. from author's summary

- 420 Use of a Muscle Relaxant-Salicylate Combination in Chronic Rheumatic Diseases. H. H. Tillis.
Ind. Med. & Surg. 32, 144-146 (Apr. 1963).

One of every 16 Americans has some form of arthritis and nonarticular rheumatism. Therapy will be continued for many years' duration. Therefore, there is a need for non-habit-forming analgesic agents which will fulfill the criteria of safety and effectiveness. Recent studies indicate that a muscle relaxant, an antihistamine, and a salicylate will provide an ideal combination for daily use in these patients for prolonged periods of time. In a double-blind study of more than one years' duration, a combination of a muscle relaxant, glyceryl guaiacolate; an antihistamine, phenyltoloxamine; and acetylsalicylic acid was given to 100 patients. Effective relief of symptoms of pain and muscle spasm was noted. No tolerance to the medication has developed. The use of these 3 drugs together was judged by the patients to be superior to results obtained with salicylates alone. Side effects were minimal, consisting only of nausea and gastrointestinal complaints of minor severity. A combination of a muscle relaxant, glyceryl guaiacolate; an antihistamine, phenyltoloxamine; and acetylsalicylic acid is recommended as adjunctive long-term therapy in patients with osteoarthritis, rheumatoid arthritis, and non-articular rheumatism.

-- Author's summary

- 421 Early Detection of Cancer Among Low-Income Groups. H. H. Whitted.
Arch. Environmental Health 6, 280-285 (Feb. 1963).

Three hundred Negro patients with malignant and non-malignant disease were studied. The relationships of several socio-economic factors to the early detection of cancer were reviewed. Present educational techniques to motivate low socio-economic groups to avail themselves of early cancer detection services are inadequate. The present program should be redesigned to incorporate educational techniques meaningful to this group. This approach will enhance efforts to detect cancer early in a group presently resistant.

-- Author's summary

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