

る ACh-release の抑制によること、従って CaCl_2 が唯一の拮抗物質であること、d-Tbc やサクシニルコリンおよびテトロドトキシンとは抑制の様式が異なることを横隔膜神経筋標本を用いて証明した。

以上演題 201 を除いて、他は毒作用を発揮する物質が多種であり、したがってその作用様式も多岐にわたっていたが、それぞれ明確な成績が出ていたように思われる。特に作用機序の解明というような仕事は 10 分では纏め難く、時間不足を免がれなかった。全員からの発言は殆んどなく討論を引き出せなかったことは残念である。次回からは以上の点を充分考慮すべきであらう。

208. Quantitative Analysis of Serum and Tissue Lipid Components in Experimental Laboratory Animals

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THINCHROGRAPHIC ANALYSIS OF SERUM LIPID COMPONENTS

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The development of a simple, rapid and sensitive method for the quantitative analysis of total serum lipid has become imperative in the routine clinical biochemistry in order to provides an analytical basis for the diagnosis of various disorders of lipid metabolism in both human and experimental laboratory animals. A most powerful tool which has been employed for the qualitative analysis of lipids is TLC. However, the quantitative analysis of lipids is still rather problematic. Although a great variety of methods have been proposed, the assay procedures are very complicated and require much time. This has often caused a lack of precision in the evaluation of the experimental results.

The present report deals with the quantitation by thinchrograph with a flame ionizing detector. The method described below allows the simultaneous estimation of at least four lipid class components, i. e., phospholipid (PL), cholesterol (Ch), triglyceride (Trig) and cholesterol ester (Ch. E), requiring only 0.2 ml of serum. In comparison with the other methods employed so far, the thinchrographic method has the advantages of being simpler, more accurate and applicable to any scale desired.

The newly developed assay procedure can be outlined as follows :

When the serum is small in quantity (0.25-0.5ml), 2 ml of 15 % TCA, followed by 0.2 ml of chloroform-methanol mixture (1 : 1) is added to the serum. After mixed by a Vortex type mixer for 30 sec., the mixture is centrifuged at 2,500 rpm for 10 min. The lower layer obtained is a chloroform layer, which contains all classes of serum lipids. 1-5 μl of chloroform solution containing lipid is applied to the thinchrod (1×150 mm),