

PROBLEMS ASSOCIATED WITH THE USE OF MERTHIOLATE AS A PRESERVATIVE IN ANTI-LYMPHOCYtic GLOBULIN

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SUMMARY

The cytotoxic properties of 2 anti-lymphocytic globulin (ALG) preparations were investigated *in vitro* by measuring the release of ^{51}Cr from labelled human peripheral blood mononuclear cells, tonsil lymphocytes and Chang cells, incubated with different concentrations of ALG. One of the ALG preparations showed non-selective cytotoxicity in the absence of complement. Evidence was obtained to suggest that this effect was due to merthiolate (sodium ethylmercurithiosalicylate) which had been added to the ALG as a preservative during manufacture. The mercury concentration in the ALG was found to be greater than that stated by the manufacturers. It is conceivable that the clinical use of such as ALG preparation might lead to mercury accumulation in the tissues, with resulting toxic effects. The whole question of the use of merthiolate in the preparation of sera for administration to human subjects needs to be reconsidered.

INTRODUCTION

During an investigation of the cytotoxic properties of 2 antilymphocytic globulin (ALG) preparations, carried out in conjunction with a therapeutic trial of ALG in acute ulcerative colitis (Heyworth, M.F. and Truelove, S.C., unpublished), it was found that one of the preparations had a complement-independent cytotoxic effect on several types of target cell. Evidence was obtained to suggest that this effect was the result of merthiolate which had been added to the ALG as a preservative during manufacture.

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Abbreviation: ALG, anti-lymphocytic globulin.