

INHIBITORY EFFECT OF SODIUM CROMOGLYCATE ON GRANULOCYTE RESPONSE TO FOOD ANTIGENS IN-VITRO

PETER J. FELL, M.D. (London),
Director Oxford Allergy Centre

DOUGLAS H. SANDBERG, M.D.
Professor University of Miami Medical School, Miami, FL

MARK J. PASULA, Ph.D.
Research Director, AMTL Corp., Miami, FL

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A pilot study was done to determine if sodium cromoglycate (SC) would inhibit the cellular response to food antigens in-vitro as measured by the ALCAT Test. Previous studies have documented the stabilizing effect of SC on Mast cells. The ALCAT Test electronically measures volume shifts in peripheral blood cells following incubation of equal aliquots of whole blood with food antigens by comparing a test histogram (sample with antigen) with a control sample (without antigen). Results are expressed in terms of percent change of cell volume and number between the test sample vs. control. Preliminary investigations carried out to identify any toxic effect of SC compared the effects of 10 dilutions on a standard WBC blood suspension (1:500) used in the test. A 1:1000 dilution which had no discernible effect on WBC's in the whole blood suspension was selected for use in evaluation of pre-treatment with SC. In ten subjects (9 females and 1 male) with various clinical conditions, in whom food sensitivities were suspected, the ALCAT Test for 10 commonly eaten foods was done with and without prior addition of SC.

<i>Results scores</i>	<i># of (-) scores</i>	<i># of Equivocals</i>	<i># of (+)</i>
	[0 - 9%]	[10 - 12%]	[>= 13 %]
NON-TREATED SAMPLES	75	16	8
NALCROM TREATED SAMPLES	85	11	4

Reactions to food occurred only in the granulocyte region of the histogram, with no notable changes in the areas containing platelets or lymphocytes. The individual test mean of 8 patients decreased by 17.6% when comparing non-treated vs. treated; in 2 patients, the mean decreased by 2.9%. In the ALCAT Test, SC appears to inhibit in-vitro changes in mean granulocyte size and number.