ABSTRACT

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ARACHIDONIC ACID METABOLISM BY POLYMORPHONUCLEAR LEUKOCYTES IN RHEUMATOID ARTHRITIS: EFFECTS OF NSAIA. H. Gonzalez, D. M. Smith, R. A. Turner, Bowman Gray School of Medicine, Winston-Salem, and R. C. Franson, Medical College of Virginia, Richmond.

Ten patients with active rheumatoid arthritis (RA) on treatment with NSAIA, 10 patients with active RA in washout period and 10 healthy controls were studied to evaluate arachidonic acid (AA) metabolism in RA-polymorphonuclear leukocytes (PMNL). PMNL were pre-labeled with 3H-AA and incubated in the presence or absence of the Ca ionophore A-23187. AA metabolites were separated using silica gel thin layer chromatography [Arch Biochem Biophys 246:263-273, 1986]. The percentage of 3H-AA metabolized to leukotriene B4 (LTB4) was significantly (p<0.05) higher in RA patients in washout (X:4.8±1.7) than in normal controls (X:3.1±1.0). LTB4 generation by PMNL from patients on NSAIA was decreased (X:4.2±1.5) and was not significantly different from controls. In order to determine whether increased phospholipase A2 (PLA2) was responsible for the higher levels of LTB4 in PMNL from RA patients, we concurrently examined PLA2 activity in 10 of our study patients using 14C-oleate incorporated into E. coli biomembranes [J Lipid Res 15:380-388, 1974]. PLA2 correlated (r:0.31) with the ability to generate LTB4 although this correlation did not reach statistical significance. The activity of RA as evaluated by a modified index [Arthritis Rheum 25:370-374, 1982] showed a similar correlation with the activity of PLA2 (r:0.49) and LTB4 (r:0.49) generation. These preliminary data suggest that increased activity of PLA2 may, in part, account for the higher generation of LTB4 by RA-PMNL and that NSAIA may be capable of modulating this abnormality.

RETICULOENDOTHELIAL SYSTEM Fc RECEPTOR FUNCTION IN MIXED CONNECTIVE TISSUE DISEASE. M. I. Hamburger, H. M. Moutsopoulos, T. J. Lawley, National Institutes of Health, Bethesda; G. C. Sharp, University of Missouri Medical School, Columbia; and M. M. Frank, National Institutes of Health, Bethesda.

Mixed connective tissue disease (MCTD) shares many clinical and laboratory findings with systemic lupus erythematosus (SLE). However, complement component (C) levels and anti-DNA titers tend to be...