

CHANGES IN SERUM AND LIVER LIPIDS AND VITAMIN A IN KWASHIORKOR DURING INITIAL RECOVERY. Guillermo Arroyave, Moisés Béhar\*, Dorothy Wilson\*, José Méndez\* and Nevin S. Scrimshaw. Institute of Nutrition of Central America and Panama (INCAP), Guatemala, Central America.

The rapid increase in various serum lipids in children with kwashiorkor treated with skim-milk, first reported by Schwartz and Dean (J. Trop. Pediat. 3: 23, 1957) has been confirmed by us. Our studies included also vitamin A and carotene. In three patients a marked rise in serum cholesterol, phospholipids and vitamin A was observed during the first 8 to 15 days of skim-milk therapy; carotene did not change. Subsequent studies included both serum samples and liver biopsies. Patients who, upon admission to the hospital had hepatic fat infiltration and only traces of liver vitamin A, showed a rise in serum cholesterol and phospholipids but failed to show any increase in serum vitamin A. On the other hand, when initially both fatty liver and significant reserves of liver vitamin A were present, a marked and simultaneous rise occurred in serum vitamin A and the serum lipids studied, which coincided with a decrease in the fat and vitamin A content of the liver tissue. These observations are taken as evidence that the rise in these serum components during initial recovery is due mainly to liberation of hepatic lipid material which accumulates abnormally in the liver of the untreated kwashiorkor patients.

(Assisted by Grant No. 981 from the National Institute of Arthritis and Metabolic Diseases of the National Institutes of Health, and by funds from The Nutrition Foundation, Inc.)