

EARLY BIOCHEMICAL CHANGES WITH TREATMENT IN KWASHIORKOR

Guillermo Arroyave°, Fernando Viteri°, Moisés Béhar° and Nevin S. Scrimshaw. Institute of Nutrition of Central America and Panama, (INCAP) Guatemala, C.A.

Laboratory tests during early hospital therapy revealed a remarkable rate of biochemical change in the first few days, not apparent from studies based on weekly examinations. In eight cases 75,000 µg. of vitamin A palmitate in oil given by stomach tube on admission with a test meal two hours later produced little effect on the vitamin A serum levels in the five subsequent hours (11 µg. to 17 µg. 100 ml.). When the same test was repeated after five days of milk therapy, a prompt increase of approximately eight-fold in serum vitamin A was obtained (27 µg. to 214 µg. 100 ml.). In four cases in which the initial test was omitted, a similar average increase was observed after five days of the same therapy (10 µg. to 92 µg. 100 ml.). In these cases, however, the average peak value was significantly lower than when the test dose was also given on admission. Good absorption (10 µg. to 87 µg. 100 ml.) was observed in another case after four days, and significant, though less marked responses, in two of three infants after three days of therapy. In patients whose hospital treatment was not under research control, responses were negative after three days in six cases and after five days in three cases. The values of serum proteins, pseudocholinesterase, alkaline phosphatase, and amylase were also investigated during the first week of treatment. Prompt changes occur in these biochemical indexes but their magnitude is frequently obscured by blood volume changes. Examples are presented for both milk and vegetable protein treated cases.

Assisted by Grant No. A-981 of the National Institutes of Health and funds from the Nutrition Foundation Inc. Federation Proceedings, 16:380, 1957. INCAP Scientific Publication I-75.