

OCCURRENCE AND NATURE OF ALTERED PLASMA PROTEIN PATTERNS IN TROPICAL AND SUBTROPICAL AREAS. Guillermo Arroyave, Division of Physiological Chemistry, Institute of Nutrition of Central America and Panama (INCAP), Guatemala, C. A.

During the last fifteen years interest in studying the blood plasma proteins of different groups of populations in tropical and subtropical areas has been continuously gaining momentum. Investigations have been particularly abundant in Africa, India and the Pacific Islands. Information from other regions, for instance, from the natives of America and Asiatic countries, is less systematic and more scarce.

Despite the relative abundance of information from the world areas mentioned, progress in the understanding of the biological causes for the differences in plasma protein patterns of different peoples has been slow. One of the problems has been the methods used for the quantitative estimation of total proteins, and for the separation and determination of the fractions, have not been standardized among different laboratories. This fact limits the validity of inter-region comparisons. The complexity of the biochemical entities under study may also be a source of discrepancy in results. Different laboratory procedures measure different aspects of the proteins present in the samples, and the fact that two different methods give essentially the same results when applied to normal plasma does not guarantee that these methods would produce similar results when used under circumstances in which alterations in plasma proteins occur.

The data available in regard to plasma albumin reveals a relatively low plasma concentration of this fraction in low socio-economic groups of population from Africa and the Pacific Islands. The scanty data from China, Japan and Latin America do not permit any such generalizations. In all instances in which elevated globulin values have been reported in general population groups, and fractionations have been carried out, the finding has proved to be related to a hyper-gammaglobulinemia. This is clearly illustrated by the report from Africa and the Pacific Islands.