Testing for HAA antigen

Serum hepatitis is transmitted in blood transfusions to about 30,000 persons a year, some 1,500 to 3,000 of whom die. Exacerbating this sizable public health problem is the fact that a significant portion of persons who regularly sell their blood are drug addicts, with high liability to infection from disease-carrying needles (SN: 8/8, p. 113)

Until recently there has been no laboratory test to detect the infectious agent in the bloodstream. Then Dr. Baruch S. Blomberg of the Institute for Cancer Research in Philadelphia isolated an antigen from the blood of Australian aborigines that was quite unexpectedly found in the blood of most persons with serum hepatitis.

This hepatitis-associated antigen (HAA) can be detected in blood or plasma by several well-known immunologic tests (SN: 6/13, p. 584). The development of tests is great progress, but problems remain.

All tests require hepatitis antibody, of which there is very little. The chief source is serum from hemophilic patients, who have a large amount of antibody because they are repeatedly exposed to HAA by blood transfusions. Animal sources are being developed, but this kind of antiserum has not yet been licensed by the Division of Biological Standards of the National Institutes of Health.

So far, screening tests are being done mainly by hospitals and medical centers, but even they have neither standard reagents nor standard methods. Dr. Elvin Kabat, a Columbia University immunologist, and member of the National Academy of Sciences' committee on HAA tests, has repeatedly urged the NIH division to undertake the kind of standardization that has made the Wassermann a reliable test.

Last week the Academy committee reported that such a standardization program is at last under way—a three-way cooperative effort between the NIH division, the Academy committee and the U.S. Public Health Service's Center for Disease Control in Atlanta.

The report, presented at the American Association of Blood Banks meeting in San Francisco, also says that the NIH division is giving highest priority to licensure and standardization of the needed antiserum, which may be approved by early 1971. The committee also proposes that blood donations be considered a charitable contribution for income-tax purposes. This, a committee member suggested, would increase donations from stable, responsible persons. Such a bill is before Congress.

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