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MEDICINE

Help Against Hepatitis

Last year at least 7,335 Americans are known to have developed serum hepatitis, a sometimes fatal liver ailment that is spread by blood transfusions and sometimes by poor sanitation or unsterile hypodermic needles. Last week Dr. Saul Krugman, chairman of the pediatrics department at New York University Medical Center, announced that he and two colleagues have succeeded in immunizing a small group of youngsters against the debilitating disease.

Krugman's work was made possible by that of another researcher, Dr. Baruch Blumberg, who in 1963 identified a small viruslike particle called the Australia antigen, which is associated with one form of hepatitis. Working with Drs. Joan Giles and Jack Hammond, Krugman tested Blumberg's findings at New York's Willowbrook State School for retarded children, the kind of institution where crowded conditions make sanitation difficult and hepatitis endemic.

Significant Step. To promote active immunization, Krugman inoculated 14 Willowbrook children with serum containing Australia antigen, which had been boiled for one minute, long enough to destroy the virus' ability to cause disease without ruining its ability to stimulate the production of antibodies. He then gave four of the 14 a second shot of the serum. For passive immunization, his team exposed 15 other children to gamma globulin containing antibodies to Australia antigen, which was known from past tests to cause hepatitis. Ten of those youngsters were given shots of a special gamma globulin obtained from hemophiliacs who, because they are repeatedly exposed to transfusions, often have high levels of hepatitis antibody. The remaining five children received doses of regular gamma globulin.

The results were encouraging. Four of the ten children who received a single shot of the heated vaccine developed resistance to hepatitis; the remaining six developed only mild cases. The four who received double doses were fully protected. The passive prevention also proved promising. Though standard gamma globulin failed to protect three of the five children exposed to hepatitis, the ten who received the hemophiliac gamma globulin escaped infection.

Krugman's success is a significant step in the war against hepatitis, but it is not yet a victory. Both the hepatitis serum and hemophiliac gamma globulin are in short supply. So is the money needed to carry on further tests. Perfecting any vaccine requires as long as seven years, and Krugman sees no reason why serum hepatitis vaccine should be an exception.