Hepatitis research at Willowbrook given new impetus

By GRETA FIELDS

Hepatitis research at Willowbrook State School is getting impetus from a discovery which has stimulated research also in other parts of the United States, France, England and elsewhere.

Physicians have been doing research on hepatitis at Willowbrook for 13 years, but have been unable to isolate the viruses which cause it, which would improve scientists' chances for creating an anti-hepatitis vaccine.

Attempts to isolate the virus have been "frustrating," and it would be premature to say that Willowbrook research is going to do so, said Dr. Joan Giles, attending physician at Willowbrook, who works with Dr. Saul Krugman, director of the hepatitis research project.

A recent discovery is nonetheless causing optimism among researchers, even in the absence of a "breakthrough," because it is giving them the first strong clues for their investigation of the disease.

The discovery of a body protein, an antigen, whose presence is associated with hepatitis, has given researchers one point of information which research is fanning open to broad areas of new knowledge.

Scientists have known about the "Australian antigen," as it was first called, since the early '60s, when it was discovered in the blood of a Australian aborigine. Hepatitis researchers became interested in it recently because it was found to be in persons particularly with exposure to hepatitis.

This discovery has several useful implications:

● Since the antigen is frequently present in the blood of persons recently exposed to hepatitis, it may be useful for early detection of the disease.

Early detection of hepatitis has always been a major problem in preventing it. By the time the person has the symptoms which would prompt him to go to a doctor, he probably has spread the disease already. Detecting the disease early would help prevent its spread during epidemics, such as the one in 1964 and 1965, when hundreds of people became ill during the summer months at Willowbrook.

A large outbreak of hepatitis is expected again in 1970-71 throughout the city, since the disease usually has cyclic outbreaks every seven years.

● If the antigen can be used to determine exposure, it could help physicians decide when gamma globulin should be given to the person to give him temporary immunity during the exposure period, said Dr. Giles.

This method is being studied now at Willowbrook. All new employes and new patients get gamma globulin when they arrive at the school, in order to give them temporary immunity in case they are exposed to hepatitis there.

Afterwards, followup tests will show whether the antigen has appeared, and how soon it appeared after they arrived.

The studies may eventually show when and how much of the gamma globulin should be given. This is important because of its scarcity and cost.

Dr. Giles believes that the use of gamma globulin at Willowbrook has helped keep hepatitis incidence there "rather low." The rate of cases for the population at Willowbrook is probably comparable to the rate throughout the city, she said.

● Since antigen could be associated with only one type of hepatitis, it may help physicians to identify the type a patient has.

There is still research controversy over this, Dr. Giles said. However, in Willowbrook research, the antigen is associated in 97 per cent of the cases with type A hepatitis, generally called serum hepatitis.

A Yale University study by Dr. Robert McCollum also revealed the association of the antigen with type A. Dr. Giles said.

● The association of the antigen with serum hepatitis and not infectious hepatitis makes a strong clinical distinction between the two types.

Willowbrook research convincingly reveals two types of virus, Dr. Giles said. The discovery of the two strains, one called the "Willowbrook strain," was noted in the Advance in 1968. The strains, which Dr. Giles calls A and B, were distinguished before then, however, she said.

In the past, people have confused the types. Some with serum hepatitis think they have the worst version of infectious hepatitis, but they are really separate infections.

● The antigen may be an infectious source in the body. If so, researchers may study it to find out what counteracts it in order to prepare vaccines or other preparations to fight the infection. However, this role of the antigen has not been proved, Dr. Giles said.

● Finally, the antigen may change a few statistics. Health statistics usually reveal many more cases of infectious hepatitis than the insidious serum hepatitis.

Statistics at Willowbrook suggests, however, that both types may run about equally, Dr. Giles said. The presence of the antigen in a person's system is believed to be an indicator of exposure to serum hepatitis, and about as many people with the antigen are found as without it, she said.