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50 Years Ago in *The Journal of Pediatrics*

The Australia Antigen: A Path to Remarkable Discoveries

Krugman S. Viral hepatitis and Australia antigen. J Pediatr 1971;78:887-91.

The Australia antigen was discovered in 1961 by Dr Baruch Blumberg when he observed precipitating antibodies in the sera of patients who had received multiple transfusions. Little did he know that over the next decade this discovery would revolutionize the field of viral hepatitis.

The name "Australia antigen" was given because Blumberg discovered the reacting sera in high numbers in the Australian aborigine. Later, he reported findings of this antigen in high rates in patients with leukemia, Hodgkin's disease, institutionalized children with Down syndrome, and patients with presumed viral hepatitis. This association with viral hepatitis lead to an eruption of research and literature including the breakthrough discovery that the Australian antigen is, in fact, the hepatitis B surface antigen.[1]

A series of events in the 1970s signaled the beginning of a new era in viral hepatology. Dr Irving Millman with Dr Blumberg developed a method of purifying the antigen for use in a vaccine, patented in 1972. Dr Harvey Alter and colleagues called for Australia antigen screening of blood products; this, along with the change to a volunteer only blood bank system, led to a 70% decrease in blood transfusion-transmitted hepatitis.[2] Further research in this decade described the chronic state of hepatitis B, the significant global impact of chronic hepatitis B and the link of hepatitis B to hepatocellular carcinoma.[1]

Despite continued academic progress with a highly effective vaccine available and viral suppressive therapy, hepatitis B remains an uncurable disease, with a significant global disease burden with more than 290 million people estimated to have chronic hepatitis B.[3] Although we are still searching for a cure, we must continue to spread awareness and fight for improved public health policy on a global perspective, especially in our most vulnerable pediatric population where vaccination is highly effective against perinatal transmission, with a target to eliminate viral hepatitis as a public health threat.[3]

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