

The Prevalence of Hepatitis—Associated Antigen (HAA) among Thais Hospitalized with Acute Hepatitis

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OBJECTIVE: 1. To gain experience in the laboratory detection of HAA;
2. To build a bank of HAA positive sera for subsequent experiments;
3. To determine the prevalence of serum hepatitis among hospitalized patients with acute hepatitis.

DESCRIPTION: According to Krugman¹, "the specific association of HAA with serum hepatitis has been amply confirmed." Using this assertion as a basic premise, Thai inpatients with acute hepatitis were surveyed to determine what proportion had serum* hepatitis.

This project was conducted during the 16 month period ending in August, 1971. The Medicine and Pediatric Wards at the Royal Thai Army Hospital and Women's Hospital served as the study site. Nurses from SEATO Laboratory visited these wards several times a week to obtain blood samples from patients with hepatitis. At the same time, blood was obtained from hospitalized patients without liver disease to serve as age and sex matched controls. The blood specimens, collected weekly throughout hospitalization, were tested for HAA and liver function indices. A diagnosis of hepatitis was accepted if the SGOT or SGPT level exceeded 100 Sigma Units and if the history and clinical findings were compatible with the diagnosis.

PROGRESS: One hundred nineteen patients ranging in age from 2 months to 70 years were accepted as cases of hepatitis. Fifty-one (43%) of these cases had at least one serum specimen positive for HAA.

The antigen was less frequently detected when the initial serum specimen was obtained late in the course of the disease. For example, the initial serum specimen for study was obtained 3 weeks or more after the onset of jaundice in 21 cases. Only 4 (18%) of these had detectable HAA.

One or two age, sex, and time matched controls were studied for each of 68 hospitalized Thai adults with acute hepatitis. Thirty-one (46%) of the hepatitis cases had sera positive for HAA compared with 15 (12%) of the controls. Thus, antigenemia was associated with hepatitis cases rather than being a non-specific function of hospitalization.

* Alternatively, one may discard previously used nomenclature and classify acute hepatitis into 2 types: HAA positive and HAA negative hepatitis. In so doing, however, many of the traditional distinctions between serum and infectious hepatitis, originally described using the tools of epidemiology and now confirmed as a consequence of the discovery of HAA, would be neglected. Thus I prefer only to modify the traditional distinctions, first by admitting that serum hepatitis may be transmitted by other than parenteral means, and then by adding HAA to the list of attributes of serum hepatitis (RBC).

The bimonthly distribution of cases shows that HAA positive hepatitis (that is, serum hepatitis) occurs year round in Bangkok (Fig. 1).

HAA was detectable in the serum from hepatitis cases of all ages (Fig. 2). As seen in this age distribution of hospitalized hepatitis cases, serum hepatitis was most frequently encountered, however, in the young adults. (The shaded area represents cases of serum hepatitis).

Serial serum specimens were obtained weekly for 4 or more weeks in 28 cases that were initially positive for HAA. Twenty-six of these became negative for HAA or had an appreciable CF titer fall. The study period for the remaining 2 cases lasted only 4 and 5 weeks. This evidence indicates that the antigenemia was related to the disease in these cases. In other words, these patients do not appear to have been chronic carriers of HAA who incidentally developed acute hepatitis.

Literature Cited

1. Krugman, S and Giles, JP: Viral hepatitis: New light on an old disease. *JAMA* 212: 1019, May 11, 1970.

BI-MONTHLY INCIDENCE OF HAA POSITIVE HEPATITIS

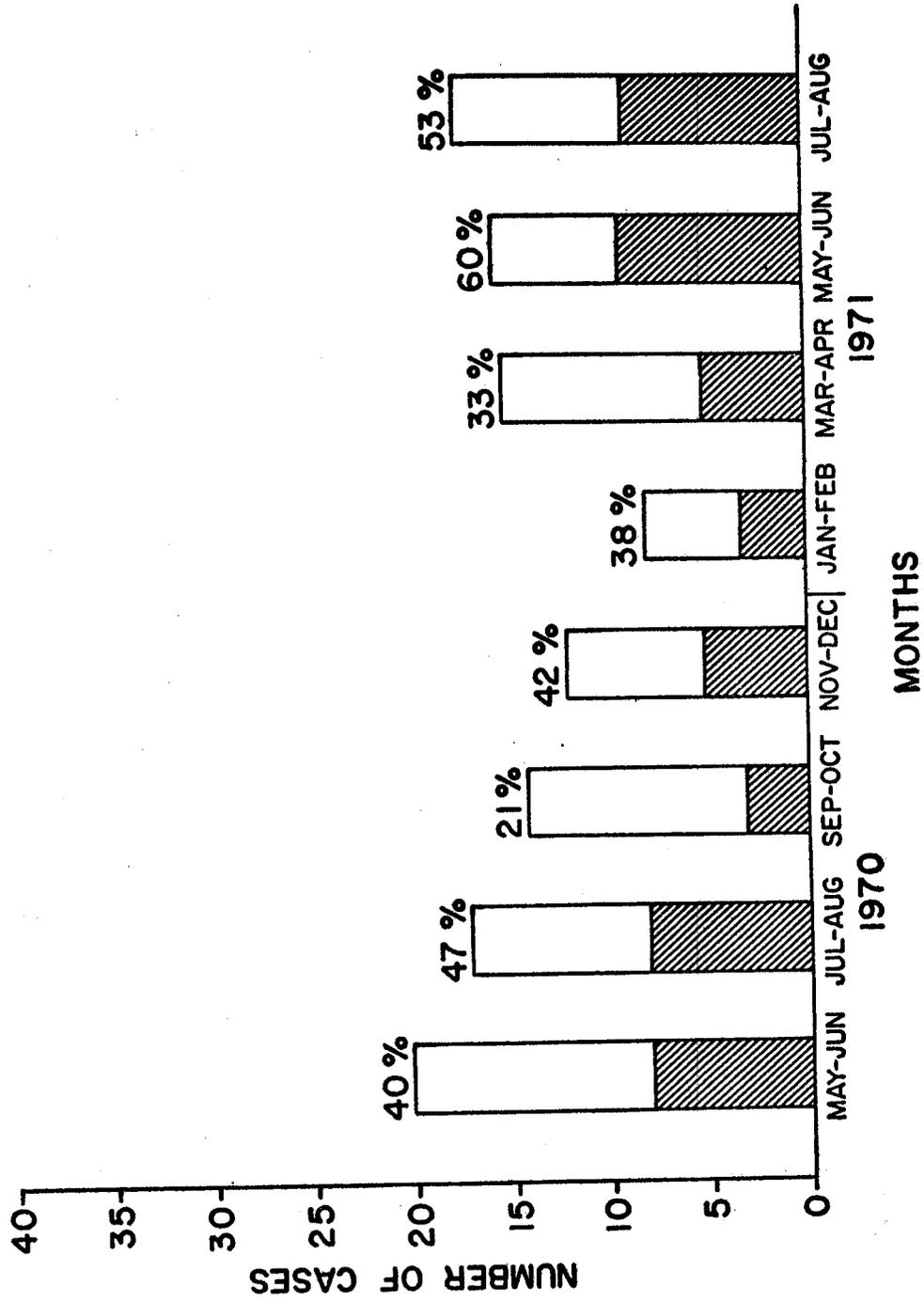


FIGURE 1.

AGE DISTRIBUTION OF HAA POSITIVE HEPATITIS

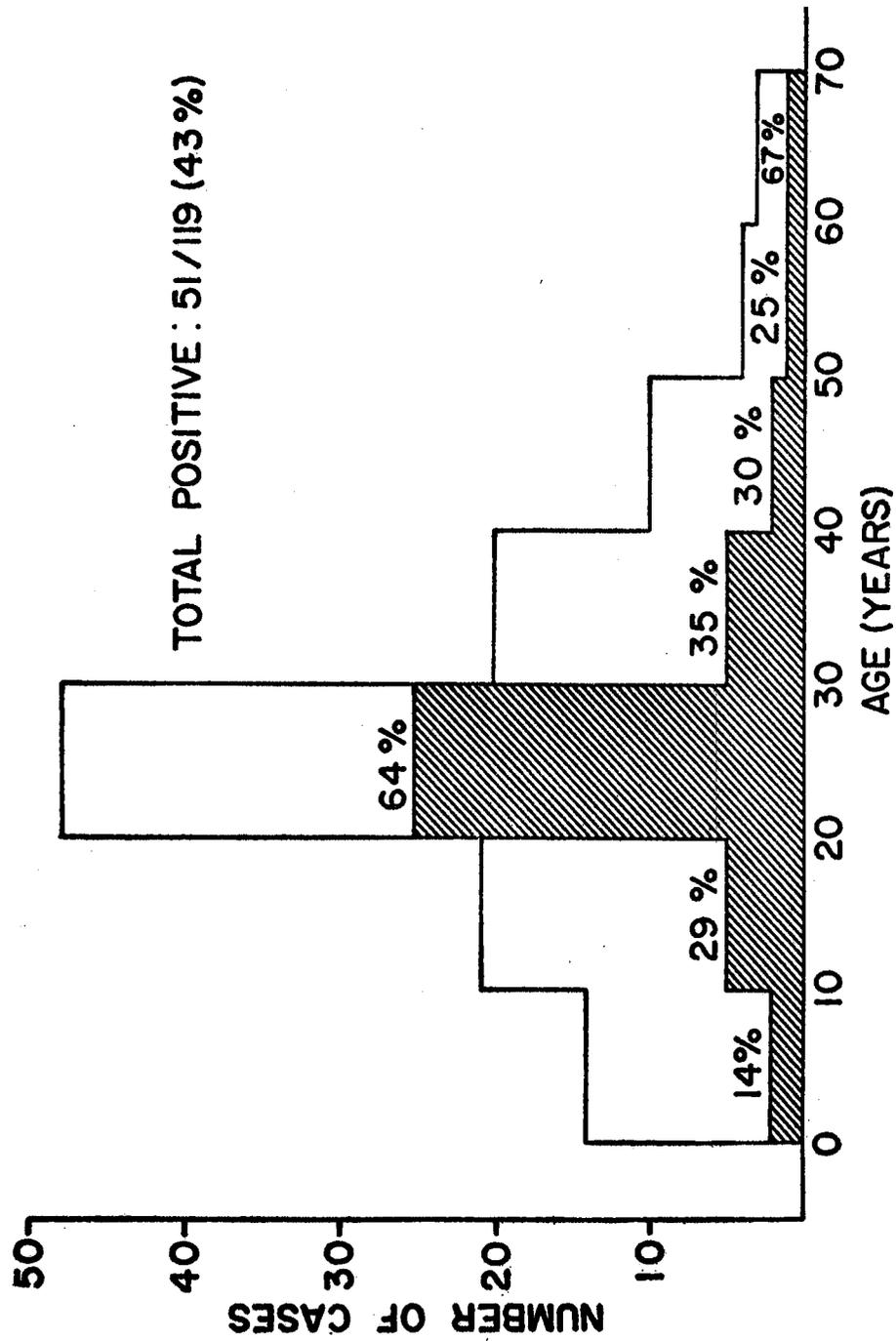


FIGURE 2.