

Prevalence of Viral Hepatitis B Surface Antigen Among Syphilitic Patients: A Serological Screening Survey

During the second world war, the incidence of syphilis increased,¹ increased again during the 1960s decreased slowly during the early 1970s and has remained at a fairly high level for the last five to ten years in most countries.² Each case of syphilis is a potent source of small outbreaks of the disease and ten to 20 cases may be traced to a single individual.¹

The incidence of viral Hepatitis B infections also has increased in the world; approximately 200 million people in the world are carriers of hepatitis, and 90% of them are found in developing countries.^{2,5} Seven and a half million people living in the Middle East are carriers of the Hepatitis B virus.⁶ These numbers occur especially in societies with frequent demographic changes such as the movement of millions of workers from one country (especially Africa and Southeast Asia) with a high incidence rate of chronic Hepatitis B,⁶ mass vaccination,^{7,8} inadequate sterilized needles and syringes, parenteral drug abuse and insect bites.⁹

The objective of the screening study we performed was to search for the viral Hepatitis B surface antigen in the sera of the adult syphilitic patients.

The survey was done in the Cen-

Table 1
Results of HBsAG Tests Among Syphilitic Patients

	Male*	Female*	Total
Infected	5	9	14
Uninfected	58	28	86
Total	63	37	100

*The difference between the Iraqi adult syphilitic patients who were infected and uninfected with Hepatitis B (male & female) is significant using the chi-square test $\chi^2 = 5.799$, $d f = 1$; $p.05 = 3.84$

tral Institute of Bacteriology in Bagdad, Iraq. Subjects were randomly chosen adult patients (Iraqi only), in whom the Venereal Disease Research Laboratory (VDRL) test and the treponemum pallidum hemagglutination (TPHA) test were positive. Their sera were frozen at -20°C until serologically tested to detect the possibility of the viral Hepatitis B infections, using the Hepanosticon Test (Organon Technika, OSS, Holland). We searched only for one viral Hepatitis B marker (HBsAG) regardless of the clinical history of both diseases, socioeconomic status and occupation.

From 100 adult syphilitic patients with positive VDRL and TPHA¹⁰ (37 women and 63 men), nine women showed a positive HBsAG test (24.3%) and five men showed a positive HBsAG test (13.5%). After that, confirmatory tests were then done for all 14 positive tests. Fourteen percent of the syphilitic patients showed positive viral HBsAG tests.

The prevalence rate of positive HBsAG tests among the syphilitic patients in our study was 14% (24.3% female; 13.5% male). The women showed a higher positive

rate than the men in contrast to the results in Saudi Arabia where the overall rate was 20.3% (the men's rate was 26% and the women's rate was 14.8%)¹¹ (Table 1).

These figures can't be generalized to the normal population of Iraq because these patients were screened. According to a 1985 survey done in Iraq to discover if the prevalence rate of HBsAG among the blood donors (approximately 4%), HBsAG carriers seemed to be higher in men (4.1%) than in women (2.5%).¹² The HBsAG carrier rate was 14% in the normal population⁷ (Tables 1, 2).

The syphilitic patients also could be a source of viral Hepatitis B infection and they may disseminate not only syphilis but also Hepatitis B through intimate sexual contact. According to our results, we suspect a high morbidity rate of both diseases (especially in the healthy young people in the near future) in cases of intimate sexual contact with promiscuous, sexually active persons.

AA. Abood, MD; A. Najim;
A. Kadum; AA. Ali Ghalib
Bagdad, Iraq

Table 2
Results of HBsAG Tests According to Country

	Iraq'	Saudi Arabia	Total
infected	1534	118	1652
Uninfected	39469	128	39597
Total	41003	246	41249

The difference between the infected and uninfected patients with Hepatitis B in Iraqi blood donors and in the normal population was highly significant using chi-square test; $\chi_2 = 1244.4$; *d.f.* = 1; *p*.05 = 3.84.

REFERENCES

- Luger A. Diagnosis of syphilis. *Bulletin of WHO*. 1981; 5:346.
- Hoofnagle JH. *Perspective on viral Hepatitis A & B*. Vol. 2, Chicago: Abbott Labs, Diagnostics Division; 1981:2.
- Criuckshank R. *Medical Microbiology: A Guide to the Laboratory Diagnosis and Control of Infection*. 11th ed. Edinburgh: Livingstone; 1965:1494.
- Tahiker MAS, Moaz A. A survey of the prevalence of E-antigen infectivity markers in HBsAG positive hospital patients. *Saudi Medical Journal*. 1984; 5:175.
- Harrison's Principle of Internal Medicine Textbook*. 10th ed. London: McGraw-Hill Book Company; 1594.
- Maynard JJ. Proceedings of the international meeting on viral Hepatitis. *Middle East Health*. 1987; 28.
- Al-Hazim MAF. Hepatitis B markers in Saudi Arabia. *Annals Of Saudi Medicine*. 1986; 6:185.
- Takieddine FN, Tufenkenji HJ. Prevalence of HBV markers in adults in Saudi in relation to age and sex. *Annals Of Saudi Medicine*. 1986; 6:205.
- Jeffrie GH. Diseases of liver. In: Kaye D, ed. *Fundamentals Of Internal Medicine*. St. Louis: C.V. Mosby Company; 1983:875.
- Mahony JD, AL-Junied A. Family screening for treponemal diseases in Saudi Arabia. *Saudi Medical Journal*. 1986; 6:119.
- El-Hazimi MA, Al-Faleh FZ, Warsy AS. Epidemiology of viral Hepatitis among the Saudi population. *Saudi Medical Journal*. 1986; 7:122.
- AL-Daghistani W, AL-Zubiadi TS, Al-Azzawi, et al. Incidence of serum hepatitis among blood donors in a blood bank of Bagdad. *Scientific Nursing Journal*. 1985; 1:76.

Letters to the Editor should be addressed to INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY Editorial Offices, C41 General Hospital, University of Iowa Hospitals and Clinics, Iowa City, IA 52242. All letters must be typed, double spaced, and may not exceed fourpages nor include more than one figure or table. The editors reserve the right to edit for purposes of clarity or brevity.

Correction

In the article "Nosocomial Bloodstream Infection at a Veterans Hospital; 1979 to 1987" (October, 1989; 10:455-464), *Streptococcus aureus* should read *Staphylococcus aureus*, *Propionibacterium acnes* should read *Propionibacterium acnes*, *Enterococcus coli* should read *Escherichia coli* and *Providentia spp.* should read *Providentia spp.* The authors and editors regret the errors.