Title: THE PREVALENCE OF HEPATITIS B IN ANESTHESIA PERSONNEL

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The prevalence of hepatitis B is increased in some groups of medical personnel when compared to the general population (1) but the rate in those administering anesthesia has not previously been studied. Anesthesia personnel at four university affilated hospitals were evaluated for hepatitis B exposure and the data were correlated for associated risk factors.

Methods. After receiving approval from the Human Research Committee and obtaining informed consent, blood samples from physicians (MD) and nurse anesthetists and anesthesia assistants (non-MD) were taken for determination of hepatitis B surface antigen (HBsAG), surface antibody (HBsAB), and core antibody (HBcAB). The volunteers completed a questionaire for historical data, characteristics of anesthestic practice, and non-anesthetic risk factors. The presence of HBsAG, HBsAB, or HBcAB was taken as evidence of current or previous infection by hepatitis B. Statistical analysis with the chi-square or Fisher exact test was performed with $P < 0.05$ considered significant.

Results. Eighty-six (38 MD, 48 non-MD) of 107 possible subjects (80.4%) were sampled. The overall prevalence of positive serologic markers of a previous or current hepatitis B infection was 23.3%. The frequency did not differ between MD (23.7%) and non-MD (22.9%) groups or between males (20.3%) and females (26.9%). Of 81 who responded that they had not previously been diagnosed as having hepatitis, 16 (19.8%) had positive serologic markers. Frequency of positive markers increased with time since graduation from medical school (MD), nursing school or college (non-MD) (TABLE) but did not correlate with an accidental puncture with a needle used on a patient known to have hepatitis B. Although 64% of those studied routinely ask patients if they have had hepatitis, 27.3% of these same personnel had positive markers (not different in frequency from those who do not inquire).

Discussion. The frequency of positive serologic markers of hepatitis B in anesthesia personnel (23.3%) was much greater that the 3-5% reported for the general population. (1) Most of those who had evidence of infection were unaware of their prior exposure. Routine questioning of patients does not identify those at risk for transmitting the disease to personnel. This study suggests that anesthesia personnel have a high risk of infection with hepatitis B and if they are not positive for HBsAB or do not have evidence of active hepatitis B, they are candidates for the hepatitis B vaccine.

Reference

1. Dienstag JL, Ryan DM: Occupational exposure to hepatitis B virus in hospital personnel: infection or immunization? Am J Epidemiol 115: 26-39, 1982

TABLE

YRS SINCE GRADUATION	+ SEROLOGY
0 - 9	13.0%
10 - 19	21.1%
20 - 29	35.7%
30 - 39	60.0%
	$p < 0.045$