

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ الآیة

قال تعالى:

يَا أَيُّهَا النَّاسُ اتَّقُوا رَبَّكُمُ الَّذِي خَلَقَكُمْ مِنْ نَفْسٍ وَاحِدَةٍ وَخَلَقَ مِنْهَا زَوْجَهَا وَبَثَّ مِنْهُمَا رِجَالًا
كَثِيرًا وَنِسَاءً ۗ وَاتَّقُوا اللَّهَ الَّذِي تَسَاءَلُونَ بِهِ وَالْأَرْحَامَ ۗ إِنَّ اللَّهَ كَانَ عَلَيْكُمْ رَقِيبًا ﴿١﴾

صدق الله العظيم
سورة النساء الآية (1)

DEDECATION

To my Father,

Mother,

Brothers

Sisters,

Friends and

Teachers

AKNOWLEDGEMENT

Thanks to the **ALMIGHTY ALLAH** for giving me the strength and patience to complete this work successfully.

Thanks to my supervisor Dr. Ahmed Ibrahim Hashim for his unlimited support and guidance.

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ABSTRACT

Hepatitis B infection is one of the world's major infectious diseases. Health care workers (HCWs) have a high risk of occupational exposure to many blood-borne viruses including HIV, Hepatitis B and Hepatitis C viruses. This was Descriptive cross-sectional study was conducted during January 2017, to detect Hepatitis B virus and to determine the possible association between Hepatitis B virus and selected risk factors among health care workers in Ad Douiem Teaching Hospital and selected health centres. Blood samples were obtained from eligible participants, sera separated by centrifugation and structured questionnaire was used to collect both demographic and clinical data. Enzyme Linked Immunosorbent Assay (ELISA) technique was used to detect Hepatitis B surface antigen (HBsAg). Ninety two (n=92) HCWs participated in this study, the males were 47/92 (51.1%) and females 45/92 (48.9%), 23/92 (25%) were vaccinated and 69/92 (75%) were not vaccinated. The sero-positivity was higher in female than male, and the infection according to occupational practice was higher among laboratory technologist 3/(3.3%) followed by laboratory attendant 3/(3.3%) and nurses 2/(2.2%). Three of the vaccinated participants were infected and the disease was more frequent in those who were exposed to an accidental injury during their work (4 out of 8 infected participants). Further studies with larger sample size are required to confirm these results.

المستخلص

عدوى الكبد الوبائي هي احد الأمراض المعدية الرئيسية في العالم . ويتعرض العاملون في مجال الرعاية الصحية لخطر كبير من التعرض المهني للإصابة من الفيروسات المنقولة عن طريق الدم فيما ذلك فيروس نقص المناعة المكتسبة ، فيروس الكبد (س) وفيروس الكبد الوبائي(ب). أجريت هذه الدراسة الوصفية المقطعية أجريت أثناء شهر يناير من العام 2017م للكشف عن فيروس التهاب الكبد الوبائي(ب) ولتحديد احتمال الارتباط بين فيروس التهاب الكبد الوبائي(ب) و عوامل الخطر المحددة للعاملين بالرعاية الصحية الأولية بمستشفى الدويم التعليمي والمراكز الصحية المختارة. جمعت عينات الدم من المتطوعين المستهدفين وفصلت بجهاز الطرد المركزي وجمعت معلومات بواسطة استبيان منتظم لجمع البيانات الديموغرافية و السريرية معا ، استخدمت تقنية اليزا للكشف عن مستضد الكبد السطحي . اثنان وتسعون من العاملين في مجال الرعاية الصحية شاركوا في هذه الدراسة . وكان عدد الذكور 47 والإناث 45 مجموعهم 92. 23 منهم أخذ لقاح فيروس التهاب الكبد الوبائي (ب) و منهم 69 لم يأخذ اللقاح . وجد ان 3 من المشاركين الذين طعموا باللقاح اصابوا بالعدوى . كما وجد ان النتائج الايجابية اعلي في الإناث من الذكور. وحسب الممارسة المهنية فقد أعطى 3 من بين إختصاصي المختبرات الطبية ,3 من موظفي التنظيف و 2 من الممرضين نتائج إيجابية .كما وجد ان عدوى المرض اكثر انتشاراً في أولئك اللذين تعرضوا للوخز بالإبر أثناء فترة العمل وكان عدد المصابين 4. يرجى إجراء دراسات مستقبلية بحجم عينة أكبر لتأكيد هذه النتائج.

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LIST OF ABBREVIATIONS

Abbreviations	Full name
ALT	Alnine Trans Aminase
CDC	Center for Disease Control
CCCDNA	Covalently closed circular Deoxyribo Nucleic Acid
C.O	Cut-Off
DNA	Deoxyribo-Nucleic Acid
ELISA	Enzyme Linked Immunosorbent assay
EIA	Enzyme Immune Assay
HBcAg	Hepatitis B core antigen
HBeAg	Hepatitis B envelope antigen
HBIG	Hepatitis B immunoglobulin
HBsAb	Hepatitis B surface antibody
HBsAg	Hepatitis B surface antigen
HBV	Hepatitis B virus
HCC	HepatoCellular Carcinoma
HCV	Hepatitis C virus
HCW	Health Care Workers
HDV	Hepatitis Delta Virus
HRP	HorseRadish Peroxidase
IgG	Immunoglobulin G
IgM	Immunoglobulin M
NC	Negative Control
OD	Optical Density
PCR	Polymerase Chain Reaction
RNA	RiboNucleic Acid
SPSS	Statistical Package for the Social Scinces
TMB	TetraMethylBenzidine
WHO	World Health Organization