

Prevalence of Hepatitis-B Among Health Care Professionals: A literature Review.

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Abstract: Hep-B is an possibly lifetime frightening infection of liver, long term infection puts individuals at more risk of death, prevalence helps to identify risks amongst the people. Health care professional are at more risk to contract HBV in many circumstances such as performing procedure, handling biomedical waste, accidental pricks and hepatitis B have mutual routes of spread, Healthcare related contagions (HAIs) are a serious issue cause mortality amongst health care professionals.

Index Terms - Hepatitis B, Health care workers, HBsAg, Hepatitis.

INTRODUCTION

Hepatitis B is an Infection of liver, it can cause scraping of the body organ, cancer and liver failure organ. It estimated that hepatitis (HBV) affects at least 257 million individual worldwide and 27 million (WHO 2015) people living with (WHO 2016) chronic hepatitis B virus and nearly estimated 887000 (WHO 2015) death occur. In India there are 56.6 million (WHO 2016) many people affects with hepatitis-B^[1]. It is revealed that health care professional are at more risk to contract HBV in many circumstances such as performing procedure, handling biomedical waste, accidental pricks and HBV contamination most commonly transferred through undefended sexual activity, contact with occupation hazardous material among health care professional, antenatal, intranatal and postnatal transmission, intravenous medication use or exposure to body fluid and infection during any procedure.

Healthcare related contagions (HAIs) are a serious problem in the health care services as they are mutual sources of infection and mortality among health care professionals^[2].

DESIGN: A literature review

Material and method: Pub med, research gate, Google scholar database were used to search the literature, Studies were included only if the data on prevalence of HBV were available. Studies used rapid test and ELISA test for conforming hep- B were included.

RESULT: Six full text articles met the inclusion criteria are involved in the literature review's. The literature review revealed that the workers who belongs to age group of 35-40 years and who has work experience of more than 30 years in clinical side has higher prevalence of HBV infection.

CONCLUSION: Literature review reveals that risk of hepatitis –B infection among health care professionals associated with length of job, age, gender, vaccination and liver diseases.

Objectives

The Objectives of this study was to systematically review the literature to

- (I) estimate prevalence of hep-B (HBV) among health care professionals.
- (II) Identify factors influencing hep-B infection amongst health care Professionals.

Inclusion and exclusion criteria

Studies were included only if the data on prevalence of HBV were available. Studies used rapid test and ELISA test for conforming hepatitis B were included and studies publish from January 2005 to November 2019 were considered ,the studies which were revealing prevalence differences in gender were included. The conferences articles, abstract, case report were excluded.

METHOD

Data and Sources of Data

Literature search

A literature review search was carried out in the following electronic bibliographic databanks: MEDLINE /PubMed and the Google SCHOLAR, included all publications up to September 2019. Search words collected of prevalence and affected by the hepatitis B virus for all years. Restriction based on 2005 JAN to September 2019 publication year.

FIGURE: 1 FLOW CHART

Study selection process:

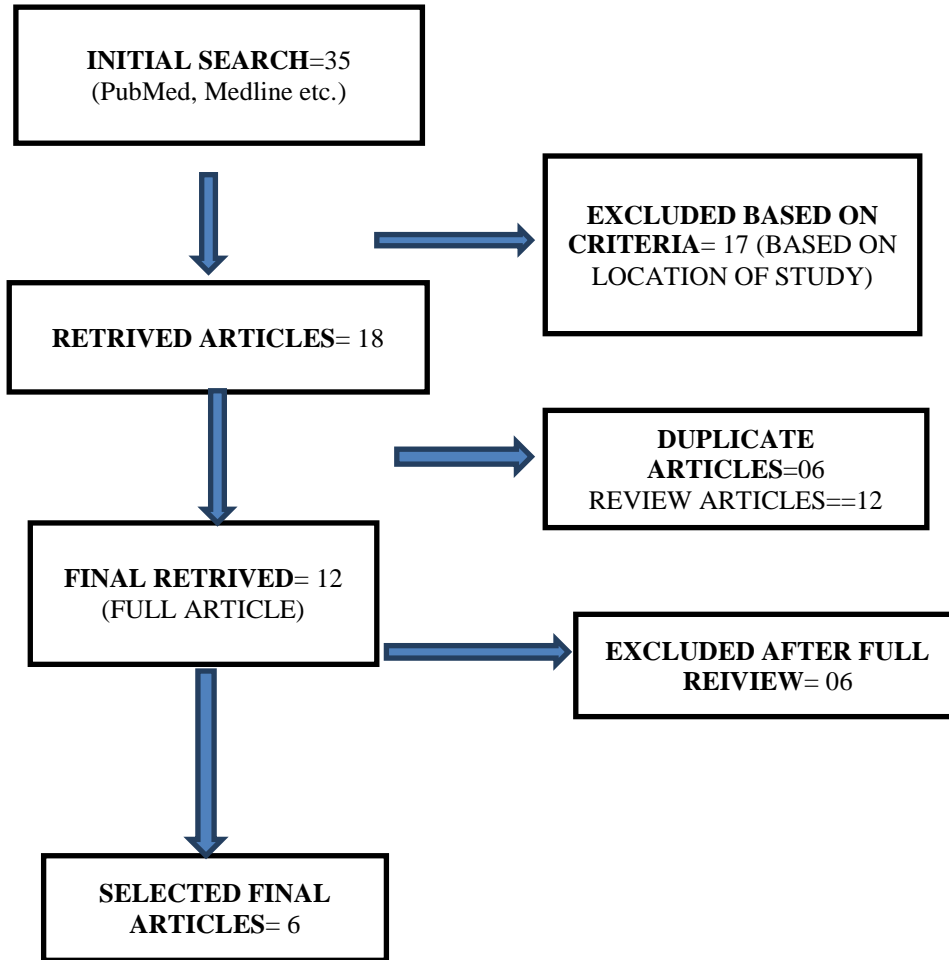


TABLE: 1

Study No	Author detail with year of publication	Region of study	Study design	Study sample	Period	Gender	Major findings
1	KHAKHKHAR VIPUL et al (2012)	Tertiary care hospital ,bhuj medical college	Cross sectional study	500	20 weeks	M-45 (2.22)	The total positive rates of HBV were 1%(5/500) , the health care professional with more than 30 years in the job, with total positivity of 2.4% (1/41) (p value: 0.01 odds ratio: 1.06) ^[3]
2	DR.SATISH R PATIL et al (2016)	Tertiary care hospital, karad Maharashtra	Cross sectional study	7373	March 2010-feb 2011	M-85 (2.63 %) F-81 (1.96 %)	The Sero-prevalence of HBsAg was found to be (2. 25%). The highest sero-prevalence was found to be significant amongst 51-60 years age group. The difference found was statistically borderline significant ($\chi^2 =3.662$; df= 1; p= 0.05) ^[4] .
3	DR.LOVELEENA AGRAWAL et al (2018)	Tertiary care hospital, Uttar Pradesh	Cross sectional study	3750	Feb 2015 to jan 2016	M-5.5% -2.4%	The sero prevalence of Hep-B contagion was found to be (3.9%). The prevalence for Heb-B infection amongst males and females was 5.5% and 2.4%, respectively. The highest sero prevalence of HBsAg was found in patient's age group of 35–44 years ^[5] .

4	SINGHAL V BORAD et al (2018)	All India new Delhi hospital	Cross sectional study	446	Jan 2008 to Dec 2009	M-15/60 (25%) F- 0%	The study displayed that defensive levels of anti-HBsAg antibody (≥ 10 m IU/ml) remained significantly More 79% (199 of 252) among vaccinated than unvaccinated 19.35% (36/186), prevalence HBsAg of male and female were 4.8% and 3.8% respectively which is higher among males ^[6] .
5	PRAVEEN KUMAR GAUTAM, SANJIV TRIPATHI et al (2018)	Gov. Medical college, Uttar Pradesh, Kannuj	Cross sectional study	4415	Jan-2018 to july 2018	M-58.32 F-41.67 Not significant change among gender	The overall prevalence of HBV= 101 (2.28%) and High sero-positivity was prevalent in age group of 21-30 years (0.88%) ^[7] .
6	PURSHOTTAM k KAUNDAL et al (2018)	Indira Gandhi medical college- Hospital	Cross sectional study	90	2016	M-0.03% F-0%	Sero-positivity was seen maximum among patients with liver infection (66.7%) followed by health care professionals (20%). Complete, the sero-positivity was 28.9%. Attention should be directed more among younger age group of 21-40 years ^[8]

RESULTS AND DISCUSSION

Literature review suggest that these are few factors influencing the prevalence such as age, socio economic condition and working experience ,gender ,vaccination. Study by KhakharVipul 2012, overall positive rate of HBsAg was (1%) and positivity was higher among experience of more than 30 years in health profession. Another study by Dr SathishR.Patil [2016] reveals that Sero prevalence [2.25%] was found to be significant among 51-60 years of age group, similar study done by Dr.Lavalina Agrawal suggests that the highest Sero-prevalence (3.9%) of HBsAg was found in patient's Age group of 35-44 years. Another study done by Singhal BoardSero positivity significantly higher among vaccinated (79%) then unvaccinated among health care providers. Praveen Kumar Gautam study [2018] revels that overall prevalence was 2.28% andS Sero positivity was higher among in age group of 21-30 years. Another study by Purushottam K. Kaundal suggests that Sero positivity (28.9%) and it's higher among younger age group age group 21-40 years.

CONCLUSION

Literature review reveals that shows high risk of hep–B infection between health care professional associated with job, gender, vaccination and liver disease.

IMPLICATION TO NURSING PRACTICE

Nursing care includes preventive, promotive, curative and rehabilitative services. There are many new initiative would be taken in prevention of hepatitis B infections, which would help in improving health among the individuals and health care professionals and prevalence would identify the cases and help to cure and prevent further infection among the health care personnel's.

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