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RESEARCH ARTICLE

NEEDLE STICK INJURIES IN HEALTH WORKERS

Prof (Dr.) Anu Gauba

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Abstract

Needlesticks are a common occurrence in the health care profession. It is estimated that 600 000 to 800 000 needlestick injuries occur per year in the United States. Of these, many, if not most, go unreported. In response to the risk of exposure, institutions have focused on primary prevention as a means of reducing the incidence of needlesticks and thereby decreasing the number of bloodborne pathogen transmissions. Needlestick injuries still occur, however, and it is important that individuals in the health care field become well informed about the exposure risks and educated regarding the appropriate response.

Introduction:-

Needlestick injuries (NSIs) are a common occupational hazard with potential physical health effects, including viral infections such as hepatitis and HIV. Less appreciated are the psychiatric consequences of NSIs, potentially including post-traumatic stress disorder (PTSD) and adjustment disorder (AD). Hypodermic injections using disposable syringes and needles are the most frequent cause of NSIs.

These injuries are a major source of infections with blood-borne diseases like Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and Human Immunodeficiency Virus (HIV).[1] The risk of transmission of this infection after exposure to percutaneous injuries with infected blood is 2–40% for HBV, 2.7–10% for HCV, and 0.3% for HIV.[2] Additionally, studies show an influence on the mental health of the injured HCWs. Anxiety, depression, and worry about being infected or transmitting the infection to their family affected their quality of life.[3]

Risk Associated With Exposure

Table No 1:- Figures(%) based on occupational exposure.

Blood Borne Virus	Estimated Incidence in WA IV Drug Users*	Risk Of Transmission with A Needlestick#	Calculated Maximal Risk of Transmission☆
HIV	1.1 - 1.6%	0.3%	0 - 0.0048%
Hepatitis B	1.8%	30%	0 - 0.54%
Hepatitis C	55 - 58%	3%	0 - 1.74%

Corresponding Author:- Prof (Dr.) Anu Gauba

Psychological Effects

The psychological effects of occupational needlestick injuries can include health anxiety, anxiety about disclosure or transmission to a sexual partner, trauma-related emotions, and depression. These effects can cause self-destructive behaviour or functional impairment in relationships and daily life. This is not mitigated by knowledge about disease transmission or post-exposure prophylaxis. Though some affected people have worsened anxiety during repeated testing, anxiety and other psychological effects typically abate after testing is complete. A minority of people affected by needlestick injuries may have lasting psychological effects, including post-traumatic stress disorder.[4]

Needle-stick incidents are associated with a number of different job factors, including heavy workload, working in surgical or intensive care units, insufficient work experience, and young age [5]. Unfortunately, most previous studies concerning the relationship between psychosocial working conditions and sharp injury have primarily treated sharp injury as a stressor of psychosocial conditions at work, while neglecting the influence of stressful condition on the high incidence of sharp injury at work. Furthermore, few studies have addressed psychosocial working conditions as a factor in sharp injury.

Gholami's study shows that the number of shifts a healthcare worker works per month, which is typically a kind of risk psychosocial condition, was found to be significantly associated with occurrence of needle-stick and sharps injuries.[6] Yonezawa also posits that working at night might significantly increase the risk of sharp injury among doctors using used general anaesthesia. Factors such as working in a highly stressful industry, long working hours, increasing administrative workload, broader responsibilities, irregular rhythms of life, verbal and physical abuse by patients, to name a few, characterize the psychosocial working conditions of healthcare workers and risk their psychological health.[7]

Studies have shown that levels of dissatisfaction, work stress, and burnout at work are high among healthcare workers and may even be higher than workers of other occupations.[8] Thus, discovering the role of stressful working conditions in the development of sharp injury at work is essential in occupational health studies of healthcare workers. Long-term exposure of stressful working conditions may result in fatigue, sleep disorders, burnout, anxiety, among others, and will further lead to impaired satisfaction, poor performance, and attention-deficit, which are important predictors of safety behaviour and negative events at work.

Therefore, this study explores the relationship between stressful working conditions and needle-stick injury to detect any direct or indirect correlation between them, in order to provide scientific evidence on strategies for the prevention of workplace injury.

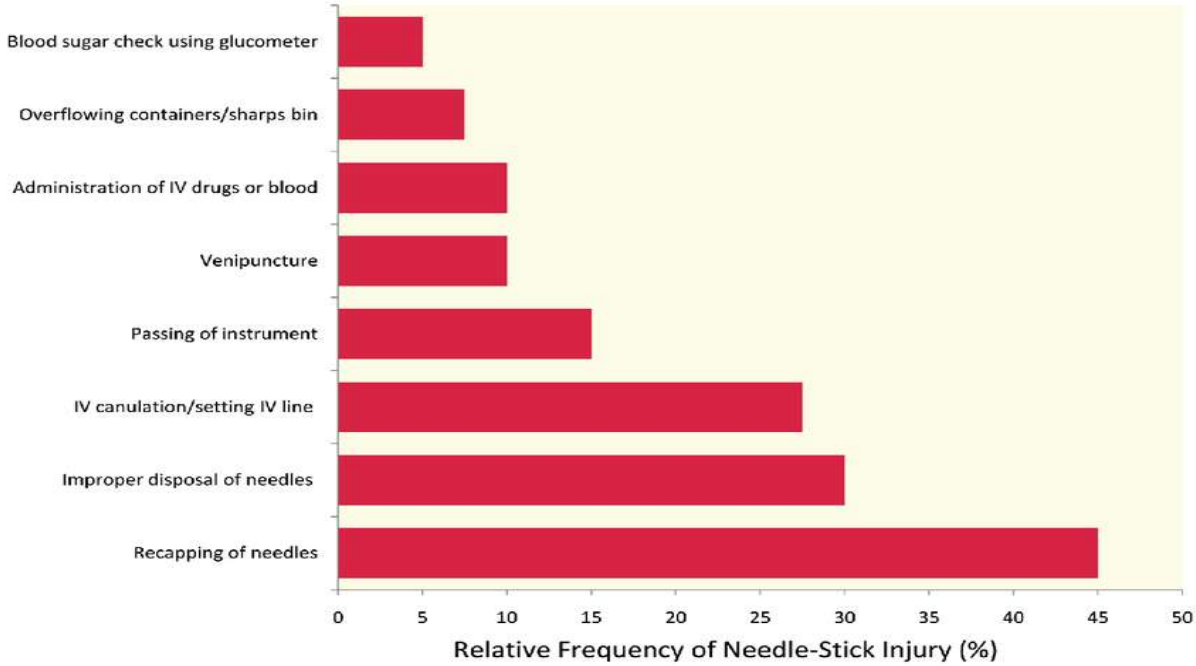

Figure No 1:- Frequency Of Needle Stick Injury.

Conclusion:-

Needle stick injury and its under reporting among healthcare professionals is still a prevalent risk. Raising awareness among healthcare workers and improving the reporting systems for needle stick injuries to ensure more protection and early use of post-exposure prophylaxis is required. Implementation of safety precautions and safe injection practices and providing engineered safety devices may further reduce the risk.

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