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AWARENESS ABOUT POST EXPOSURE PROPHYLAXIS AMONG HEALTH CARE PROFESSIONALS AND OTHER HOSPITAL WORKERS

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ABSTRACT

Introduction: With the increasing prevalence of HIV and HBV infection awareness about the post exposure prophylaxis is mandatory to prevent infections, especially among the health care workers. Main purpose of this study is to assess the awareness of Post Exposure Prophylaxis among the health care workers.

Methodology: Self administered questionnaire was used to assess the awareness and attitude towards post exposure prophylaxis among health care workers.

Results: Doctors were well aware about the PEP regimen and were treated earlier, whenever there is history of needle stick injury, followed by nurses and lab technicians. 85% of the nurses and lab technicians were aware about PEP and only 75% of the workers handling waste products are aware about the availability PEP regimens.

Conclusion: The result of this study shows that we should focus more on creating awareness about PEP among health care workers especially those who are handling bio-waste products.

KEYWORDS : PEP, health care professional, post exposure prophylaxis, HIV, HBV

INTRODUCTION

With the increasing prevalence of HIV and HBV infection, awareness about the post exposure prophylaxis is mandatory to prevent the infections, especially among the health care workers. Average risk of HIV infection subsequent to percutaneous contact to HIV infected blood is 0.3%[1] and after a mucous membrane exposure, approximately 0.09%. The risk for HBV and HCV transmissions are 9–30% and 1–10% respectively. Post exposure prophylaxis (PEP) is a preventive medical intervention to curtail transmission of pathogenic microbes after an exposure and refers to comprehensive management instituted to minimize the risk of infection following potential exposure to blood-borne pathogens[2]. Various exposures that may increase the risk of transmission of pathogens includes: a percutaneous injury, contact with the mucous membrane of the eye or mouth, contact with non-intact skin or contact with the intact skin for a longer duration with potentially infectious materials[3]. PEP should be initiated as early as possible after an exposure. The efficacy decreases as time gap between the exposure and the initiation of PEP increases[4].

Definition

PEP contains first aid, counselling, assessing risk factors, laboratory investigations, consent of the exposed person and source and following the risk assessment, providing of short term of drugs as per regime, along with follow-up evaluation.

Post exposure prophylaxis (PEP) is effective in preventing illness after potential or documented exposure to a variety of microbial pathogens and in reducing the risk of secondary spread of infection. Guidelines have been published by the centre for disease control and prevention and advisory committee on immunization practices for proper use of PEP for blood borne pathogens, for microorganism transmitted by either airborne or droplet spread or through direct contact, and for infections acquired after traumatic injuries[5].

Depending on the type of exposure, different forms of PEP are available, including vaccines, immunoglobulins, antibiotics, and antiviral medications. Doctors should assess a patient's potential need for PEP based on several factors, including the type of exposure, the timing and severity of illness in the source patient, the exposed person's susceptibility to infectious diseases of concern, and the relative risks and benefits of the PEP regimen in an individual situation.[(5)]

Objectives

- To know the awareness about PEP in health care workers
- Attitude towards PEP among health care workers,
- To assess the knowledge of PEP among health care workers
- To create awareness about PEP programs among health care workers.
- To assess usage of PEP among health care workers.

HBV

After on potential contact with an infected material of a HBsAg positive individual, if the HCP is unvaccinated or antiHBsAg level is < 10 mIU/ml, PEP should be started with hepatitis B immunoglobulin along with the vaccines given at a different site[6]. The chance of seroconversion can be reduced by 90% with this post-exposure prophylaxis[6]. If HCP was vaccinated and if the anti-HBs titer is ≥10 milli-international units/mL, no PEPfor HBV is needed. If the anti-HBs titer is <10 milli-international units/mL, PEP depends upon the HBsAg status of the source patient[7].

HIV

From the year 1985 to 2013 there were 58 cases of occupationally acquired HIV infection were reported[8]. Among these , 49 workers had percutaneous exposure , five sustained mucocutaneous exposures, two had both percutaneous and mucocutaneous exposures, and for two, route of exposure is unclear. Forty-nine were direct exposure to blood from an HIV-infected person, 1 had exposure to visibly bloody fluid, 4 got exposed to an unspecified fluid, and 4 to the virus in a laboratory. 26 out of the above 58 persons developed the AIDS.

Methodology:

This cross sectional study was conducted among the health care professionals of a tertiary care hospital in Puducherry. Doctors, staff nurses, paramedical staffs (Technicians) and other hospital workers who handle biomedical wastes (housekeeping, ward boys and other segregators) were included in the study. Interns, PG Students and paramedical students were excluded from the study. A Self-administered questionnaire in both English and Tamil was used. Each questionnaire contained 12 questions which mainly focused towards previous experience of post exposure prophylaxis and current knowledge and awareness about post exposure prophylaxis.Totally 180 health care professionals and hospital workers were assessed. Health care workers were grouped into 3 categories.

- Doctors
- Nurses and Lab technicians
- Workers handling waste products (housekeeping, ward boys and other segregators).

The sample size was equally distributed among the above groups.

RESULTS:

Questionnaire was collected from doctors, staff nurses and lab technician, workers handling waste products. Among the doctors group all the doctors were aware about the need and availability of the PEP. All of them had knowledge about the importance of early initiation of PEP. Two among the sixty doctors responded that there is no need for PEP, in case of prolonged exposure of blood with intact skin. Fifty-one of sixty nurses and technicians were aware about PEP and the need to seek early consultation. Only forty-five among the sixty workers handling waste products were having knowledge about the PEP regimens. Thirty-two doctors, fifty-three nurses and technicians and forty-four health care workers gave past history of needle stick injury.

DISCUSSION:

In our study all the doctors were aware about the PEP. Patricia A. Agaba et al conducted a cross sectional study in Nigeria among the 175 Family Physicians, at two national conferences. Results were majority (97.7%) of the respondents was aware of the concept of HIV PEP and 99.4% believed it was effective in preventing HIV transmission[9]. Over two third of the respondents had been exposed to NSI; however, less than 25% of those exposed received PEP. There was high level of knowledge of the various high-risk body fluids as well as types of high-risk exposures. 93.9% of the respondents were aware that HIV PEP should commence within an hour of exposure, 83.3% had knowledge about correct duration of HIV PEP, but only 57.0% knew the preferred PEP regimen for high-risk exposures. In contrast, study by Biniam Mathewos et al, in Ethiopia 36.9% of participants had inadequate knowledge about PEP. Among the 33.8% had potential exposure and only 74.2% of the exposed took PEP[10].

Punya Suvarna et al studied 170 HCPs in Mangalore and found that thirty-one percent of the HCWs had exposure, 56% didn't have and 13% didn't remember. Among the exposed only 10% had taken PEP regimen and only 37.5% had taken it within 2 hrs of exposure[11].

Though many of the studied health workers had HIV risk exposure, only few used post-exposure prophylaxis.33 HCPs in Yunnan Province, China were interviewed. Information about occupational exposures of the HCPs and their co-workers were collected and analyzed by Chunqing Lin. It was concluded that most occupational exposure accidents happened during emergencies, when HCPs did not have time to consider self-protection. HIV exposure among HCP led to severe adverse psychological impact, such as stress and anxiety. Adherence with PEP recommendations among participants was poor; barriers to better compliance were identified. This study emphasizes the key role of institutional support in promoting adherence with PEP guidelines among exposed health care providers. Further training and emphasis on universal precautions and PEP guidelines may reduce the risk of occupational infections[12].

Nearly 99.9% physicians were well trained with PEP regimen and its significance. Paramedical staffs were also knowledgeable regarding PEP regimen and about needle stick injuries. Others, like housekeeping, ward attenders need to be trained for PEP regimens, to prevent from occupational transmission of these infectious diseases.

CONCLUSION:

The result of this study shows that doctors have adequate knowledge about the need of PEP and the time of initiation. We should focus more on creating awareness about PEP among paramedical staffs, especially the hospital workers those who are handling bio-waste products.

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