Hospital Waste and Cleaning Workers in Baquba Teaching Hospital

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Abstract

Background: Medical waste is potentially hazardous, infectious, and toxic materials. It therefore requires special handling and disposal practices.

Aims: To determine:

1. Impact of medical waste upon cleaning workers.
2. Awareness of cleaning workers toward medical waste in Baquba teaching hospital

Subjects and Methods: A cross-sectional study was conducted among a random sample of (80) employees in Baquba teaching hospital in May 2011. Self-administered questionnaire which included occupational, organisational factors and sociodemographic variables was used. In addition, researcher observed collection, segregation, transportation, and disposal of medical waste at the hospital.

Result: Most of the cleaning workers are younger age (35 year), male 85%, the rate of illiteracy among cleaners in the hospitals was high 47.5%, the highest level of knowledge about hazard categories of medical waste had worked for (2–5 years), the cleaners are focused mainly on the sharps particles first degree, percentage who reported sharps as medical waste about 98%.

Conclusion: Most cleaning workers lacked sufficient awareness of impacts of poor clinical waste disposal and had never heard of any policy national or international on safe clinical waste management. Methods of collecting, segregating, transporting and disposing clinical waste at the hospital was poor.

Keywords: Medical waste, hospitals, workers.

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Introduction

The nature and circumstances of the working style of the worker hygiene in hospitals could be the cause of his illnesses and injuries affecting the work of his health and his life, and reduce the efficiency and productivity, and consequently affect the services and the interests of society and the state. Factor is hygiene in the hospital is an essential element in maintaining the cleanliness of the hospital and public health; so you must protect him and his health care and psychological effects and the circumstances in which it reflected the nature of work chosen by him or as a walk in this life. Medical waste is hazardous waste; because of its negative effects on society and public health, if not handled properly. There are many diseases that can be transmitted by medical waste, such as viral hepatitis "B" and viral hepatitis "C", AIDS, etc. of the disease [1], through the exposure of wounds waste acute medical needle contaminated with the blood of patients infected with such viruses (HpC, HpB, HIV), as the hospitals are the

main source for the production of medical waste.

There are many classification systems used to distinguish the different components of medical waste, which vary from one country to another or from one institution to another. The WHO has developed a special classification of developing countries, for practical purposes,

can be summarized as follows [2, 11]:

(A)non-hazardous medical waste (general waste).

(B) sharp tools (needles, syringes, scalpels, knives, broken glass).

(C) infectious waste.

(D) chemical and medical waste.

(E) Other medical hazardous waste.

This classification of developing countries has been simplified into five sections, so as to facilitate separation of medical wastes, store, and transfer within and outside the medical establishment. As it is, the more varieties, became separated and collected, stored and transported more difficult. This classification could be adopted in large hospitals. In small health centers can simplify this classification into two categories only: medical waste and non-medical waste.

The Sharps (Group B) must be placed in special containers made for this purpose. If this is not possible you can use cans of soft drinks, or plastic bottles or any containers similar to be used for the disposal of needles and other sharp tools, as these tools may cause great danger to the crew that deals with it if disposed of with normal waste. All medical waste generated in the areas of treatment and in (Group C) and proposed by the WHO for developing countries, should be disposed of in a yellow container. The group D (solid medical waste chemicals and liquid) must be disposed of as to ensure public safety for all. Drugs and chemicals resulting from the various different surgeries should be disposed of after treatment, and can not in any way with the disposal of waste water without treatment [3]. As well as the drugs should be at the end of its mandate, or when not needed to a responsible person in the hospital, and then to a central point such as the Ministry of Health. In institutions that can not do so where, to be disposed of by burning, which is medical waste [4,5].

Aims

To determine:

1. Impact of medical waste upon cleaning workers.
2. Awareness of cleaning workers toward medical waste in Baquba teaching hospital.

Subjects and Methods

The researchers conducted a survey to evaluate hospital workers' awareness of health and environmental impacts of poor clinical waste disposal in Baquba teaching hospital in May 2011. A cross-sectional study was conducted among a random sample of (80) employees. Self-administered questionnaire which included occupational and organisational factors and sociodemographic variables was used.

In addition, we observed collection, segregation, transportation, and disposal of clinical waste at the hospital.

Data collected were analyzed using Epi-Info computer software program

Result

The following are the results of some selected properties that relate to personal information in general and the most important are:

Age: show that there is considerable variability in the age of the cleaners, where the youngest was 18 years old, while the oldest is 60 years and the average age of 30.77 years. Ages were divided into age groups as shown in the table (1). It is noted from Table (1), cleaners; most of the younger age, since more than 95% of them is under

the age of 43 years, and more than 72% of cleaners under the age of 35 years.

(Table 1): Distribution of the study group according to their age.

Age (year)	Frequency	Percentage (100%)
18-27	27	33.8
28-37	23	28.8
38-48	12	15.0
>48	18	22.5
Total	80	100

Gender: Table 2 show that male cleaners in hospitals 85% and females 15%

(Table 2): Distribution of the study group according to their gender.

Gender	Frequency	Percentage (100%)
Male	68	85
Female	12	15
Total	80	100

Education: Table (3) shows the distribution of educational attainment to the cleaners. It is noted from this table that there is a clear contrast in their learning. It can be said in general, that the rate of illiteracy among cleaners in the hospitals was high 47.5% and the percentage of workers who hold qualifications after high school or are still studying at an institution of higher education amounted to 7%.

(Table 3): Distribution of the study group according to their education.

Level of Education	Frequency	Percentage (100%)
Illiterate	38	47.5
Primary	36	45
Secondary and higher	6	7.5
total	80	100

Working Period: Table (4) shows the highest level of knowledge of hazard categories of medical waste was among those who had worked for a moderate length of time (2–5 years). This may be attributed to the fact that concern about medical waste is recent in our part of the world. As for occupational hazards, the highest level of knowledge was found in those who had worked for more than 7 years and lowest for newly employed staff members. This might indicate that personnel gain experience about occupational hazards from accidents that happen in their daily work.

(Table 4): Distribution of the study group according to their Working Period in the Hospitals (years).

Working period (years)	**Frequency**	**Percentage (100%)**
< 1	10	12.5
1-3	40	50.0
4-7	15	18.8
> 7	15	18.8
	80	100

The definition of medical waste: Medical waste management and its relationship to occupational safety for cleaners. Table (5) illustrates different categories of medical waste, it is noted from the table that the cleaners are focused mainly on introducing them in the sharps first degree, where the percentage who reported sharps as medical waste about 98%. On the other hand is not focus on some of the hazardous waste, such resulting from the laboratory, which they reported the proportion of worker reached about 25% only. This indicates the lack of sufficient knowledge of the cleaners about the meaning of medical waste, and the extent of risk that may pose if they do not deal with it properly.

(Table 5): Distribution of the study group according to their knowledge of the constituents and hazard categories of medical waste.

Waste categories	Known the hazard	**Percentage (100%)**	Unknown the hazard	**Percentage (100%)**
Sharps (needles, syringes, scalpels, knives,broken glass	79	98.5	1	1.3
Infectious	60	75.0	20	25.0
Noninfectious	50	62.5	30	37.5

Discussion

Most of the cleaners who are young, has been observed that the definition of cleaning workers for medical waste is almost confined to the sharps such as needles, blades, syringes primarily; while cotton, gauze, gloves, bed sheets, masks, and plastic pipes, and patches the second place, and this is contrary to what is customary in the world. And found that there are serious types of medical waste not mentioned only by a few cleaners, and this indicates that the workers lacked sufficient awareness of medical waste and its risk.The study revealed that medical waste in Baquba teaching hospital is not given sufficient priority or concern. There is no safe system of medical waste management, a lack of necessary supplies and facilities, a lack of knowledge among health workers and a lack of coordination among different ministries. There was no previous studies in Iraq.

The high level of knowledge of sharps as constituents of medical waste, the hazard category of medical waste as an occupational hazard may be due to the familiarity of health workers with syringes and needles and with

accidents that happen as a result of sharps injury [6,7,8]. Knowledge of exposure to occupational hazard reported was lower (75.0%) than in Egypt (92.9%) [9]

Incineration is the main route for medical waste disposal. The medical waste was incinerated in hospital incinerators. Incineration is the recommended method in many studies [2, 10-12]. However, incineration has adverse effects on the environment [13] and the reliability of incinerators has to be considered. It was observed that the temperature of incineration did not comply with standard operation and ashes were collected manually without protective devices, which does not comply with Environmental Protection Agency or World Health Organization standards [14].

Conclusion

Most cleaning workers lacked sufficient awareness of impacts of poor clinical waste disposal and had never heard of any policy national or international on safe clinical waste management. Methods of collecting, segregating, transporting and disposing clinical waste at the hospital was poor.

The cleaners in the hospitals that have important and direct role in dealing with medical waste, the cleaning workers most exposed to the risks arising from dealing with the medical waste.

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