

RESEARCH PAPER:

A study on waste generated by health care units in Gwalior district, India

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Asian Journal of Environmental Science (December, 2009 to May, 2010) Vol. 4 No. 2 : 158-160

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SUMMARY

In the present work two large hospitals of Gwalior viz., J.A. Group of Hospitals and Cancer Hospital have been studied taking into consideration the various aspects of hospital wastes. The study was conducted only to reveal the per day waste generation in two hospitals. In the waste management processes, segregation and storage were not properly followed in these hospitals. However, collection and transportation activities to final disposal were practiced. The policy of quality control system in waste management needs to be improved.

Key words :

Biomedical waste,
Hospital,
Healthcare units,
Waste
management

Hospitals are the institutions that provide medical, surgical, or psychiatric care and treatment for the sick or injured persons. But during the diagnosing and treating the sick or injured, wastes are produced that may be hazardous to the human health. Health care waste is the total waste that is generated from hospitals, medical research centre, laboratories, clinics, blood banks, veterinary health care etc. Biomedical waste includes sharps, soiled waste, disposables, anatomical waste, cultures, discarded medicines, chemical wastes etc. (Pandit *et al.*, 2007).

According to WHO from the total of waste generated by health care activities, almost 80% is general waste comparable to domestic waste the remaining approximately 20% of wastes are considered to be hazardous materials that may be infectious, toxic or radioactive.

Present study has been made to study the status of hospital waste and to disposal in Gwalior.

MATERIALS AND METHODS

The survey was carried out in 2 hospitals namely, J.A. Group of Hospitals including (J.A. Hospital and Kamalaraja Hospital) and Cancer hospital, Gwalior. The average solid waste was calculated by taking samples of solid waste, from each study site randomly for a period of 21 days. Samples were collected in polythene bag in the afternoon. Average generation of various infectious and non infectious items per sampling unit was calculated by analyzing solid

waste generated in each sampling unit. Average solid waste generation per day at each study site was calculated by multiplying average solid waste/capita/day with average number of patient / day of each site.

RESULTS AND DISCUSSION

Hospital waste management is of vital importance as its improper management poses risks to health care workers, waste handlers, patients, community in general and largely the environment.

The different types of wastes generated in the studied hospitals included paper, soiled dressings, sponges, body tissue, waste ampoules, disposable syringes, draper, catheters, drainage sets, colostomy bags, surgical gloves, contaminated glasswares, plastics, specimen containers, specimen slides, cartons, crates, packing materials, metal containers, food containers, solution bottles, pharmaceutical bottles and waste from x-ray department. In these hospitals, these wastes were not segregated in different types.

The average solid waste generation per capita/day was observed 2.02 kg and 1.25 at J.A. group of Hospitals and Cancer Hospital, respectively and the solid waste generation per day at the source was found to be 303 kg and 62.5 kg at J.A. group of hospitals and Cancer hospital as shown in Table 1. Average collection of recyclable plastic waste consisted of glucose bottles, spirit bottles and H₂O₂ bottle which were observed to be 45.02 kg at J.A.

Accepted :
September, 2009