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HOSPITAL SOLID WASTE AND ITS MANAGEMENT IN A HOSPITAL OF BHOPAL, INDIA

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ABSTRACT

It is ironical,Hospital which provide succor to the ailing, can also create health hazards. Indiscriminate disposal of wastes is indeed one of the major sources for spread of pollution and infection. Bio-medical waste has emerged as an issue of major concern not only to hospitals and nursing homes but also to environmental law enforcement Agencies, Media and the general people. Hospital-waste generated from various sources has now become a worldwide problem and much attention is being given currently to evolve solution to this problem.

INTRODUCTION

Hospital generate a wide range of waste, solid waste is one of them According to western figures, approximately 15-20% of their hospital waste is hazardous and infectious. Although not many detailed studies have been conducted in India, this proportion may be much higher in our country as proper waste segregation does not exist. Hospital solid waste include anatomical, pathological, infectious, non-infectious, sharps, kitchen waste and general waste (paper, cardboard, plastic etc.) However despite the existence of law and provision of punishment, the Bio-medical wastes are still not handled with the clinical care needed to avoid the hazards. With this objective the present work was undertaken to find out the status of Bio-Medical wastes management at Hamidia hospital,a prestigious hospital of repute in the capital city of Bhopal. Probable impact of Hospital waste and management strategies also discussed in this paper.

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MATERIALS AND METHODS

waste samples were collected from Hamidia Hospital which is 900 bedded hospital. For characterization, Quantification and evaluation of waste generated from hospital a ten days survey spread over a month was conducted. The waste generated was first of all segregated at the source by providing colour coded bag . Red, Yellow, and white coloured bags are used for every ward.

Yellow bag contain

Human Anatomical waste like Human tissues, organs, body parts. Animal waste like Animal tissues, organs, body parts, carcasses, bleeding parts, fluids blood and experimental animals used in research. Microbiological and technological waste and Soiled waste like items contaminated with blood and body fluids including cotton, dressings, soiled plasters etc.

Red bag contain

Microbiological and technological waste, Soiled wasteand solid waste like Waste generated from disposable items other than the waste sharps such as tubing, catheters, intravenous sets etc.

White bag contain

Waste sharp and solid waste like Needles, syringes, scalpels, blades, glass, disposable items treated catheters, intravenous sets and Kitchen waste was collected separately.

RESULTS AND DISCUSSION

It is found that almost 101.6 kg waste generated daily from Hospital.Amount and Percentage of different categories shown in table 01 Waste does not segregated and manage properly. Untreated hospital waste is a source of diseases.Hospital waste can causes air pollution, water and soil pollution. It can spread infections as hospital waste is ideal place for the breeding of diseases vectors. Most of the time the people employed for collection of these wastes are affected with various diseases.

Waste management strategy

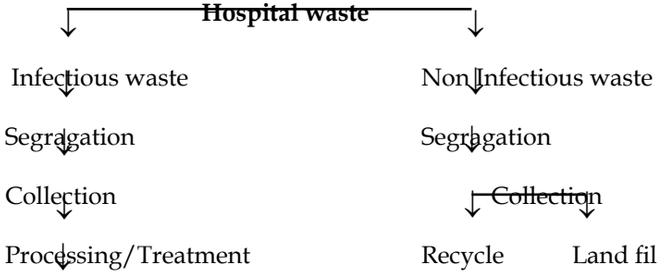

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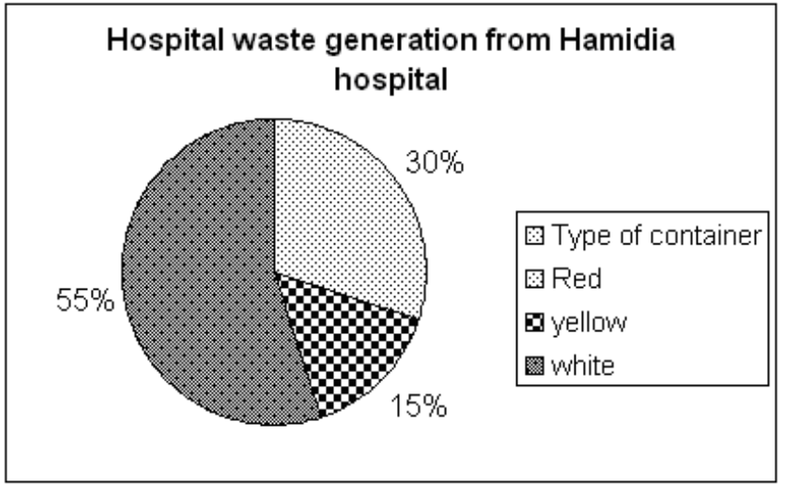
Table 1

S.No.	Sources	Range	Average waste	%of total waste
	Departments			
1.	Gynae OPD	1.60-5.02	3.71	3.65
2.	X-Ray	1.20-2.32	1.58	1.55
3.	Pathology	1.64-3.34	2.19	2.15
	Wards			
1.	ICU	3.02-9.94	7.77	7.64
2.	OT	1.22-8.67	5.2	5.11
3.	Children ward	1.1-4.96	2.6	2.55
4.	A.N.C.	.30-5.43	2.48	2.44
5.	Gynae	3.05-5.93	4.72	4.64
6.	Maternity	3.42-9.50	9.26	9.11
7.	Labour room	5.32-18.97	15.05	14.8
8.	Neuro surgery	1.64-2.30	1.31	1.28
9.	Medicine	.92-4.12	2.37	2.33
10.	Private wards	.96-2.94	1.89	1.86
11.	Delux ward	.34-1.56	1.15	1.13
12.	Sp. Diseases wards	.40-1.10	0.99	9.74
13.	Plaster room	7.45-5.04	3.65	3.59
14.	casuality room	2.56-5.35	4.01	3.94
15.	Minor OT	1.20-2.77	2.18	2.14
16.	Central dispensory	4.5-9.95	7.57	7.45
	Other sources			
1.	Kitchen waste	19.85-28.52	16.92	16.65
2.	Canteen waste	3.5-6.9	5.00	4.92
		Total	101.6	



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CONCLUSION

The hospitals produce considerable amount of waste which contain infectious as well as non infectious waste. Hospital waste should not be stored or dumped without Proper processing. Hospitals must be aware and follow Biomedical Waste (Management and Handling) Rules to manage there waste. If the problem of hospital waste can be managed we can save ourselves from future pathogenic disasters.

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