

Hospital Linen Storage : Is It Clean ?

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INTRODUCTION

Hospital linen storage is a potential source for health care acquired infection. In 2018, major pseudo-outbreak of *Bacillus sp* bacteremia associated with linen occurred in our centre¹. Besides *Bacillus sp*, fungal species also can be found in contaminated linen. Generally, it is not recommended that sampling be performed routinely but there are occasions when sampling may be useful to describe hygienic linen storage, hence we described the activities to prevent contaminated linen in HRPZ II.

MATERIALS AND METHODS

The study was started on 25th July 2023 by doing site visit at linen area. Observation at the main linen storage was carried on. Air sampling was done at inside (figure 3) and outside linen storage. Temperature and humidity were captured. Pre and post renovation surveillance sampling were done. Microbiology method was proceeded according to standard procedure.

RESULTS

Observation showed several non-compliance issues regarding floor plan, ventilation, rack, first in first out (FIFO) practice, cleaning schedule and trolley were detected (figure 4). A microbiologic surveillance study was conducted on 31st July 2023 at main linen storage showed present of *Monilia sp*, *Aspergillus sp*, and *Penicillium sp* as in figure 1. Renovation was done. Post renovation surveillance showed fewer CFU on the agar plate (figure 2). Temperature post renovation was 24.5 Celsius and humidity was 52.0 % which is optimum for linen storage.



Figure 1 : Pre-renovation



Figure 2 : Post-Renovation



Figure 3. Air sampling in linen store post-renovation



Figure 4. Linen store before renovation



Figure 5. Linen store post renovation – anteroom

DISCUSSION

At 33% of hospitals, the linen were visibly unclean². The linen storage should be a clean area category. *Aspergillus sp* is the commonest fungal contaminated linen. Significant amount of spore can cause disease to patient especially in immunosuppression patients³. The new floor plan was done, no trolley from outside can go inside, sliding door and anteroom were built (figure 5). New rack with easy clean base were restore. FIFO signage was put on the rack to ensure there is always new linen supplied to the users. Air condition functioning well, no fans. Sort, package, transport, and store clean linens in a manner that prevents risk of contamination by dust, debris, soiled linens or other soiled items. Each floor/ward should have a designated room for sorting and storing clean linens⁴. Continuous monitoring was done monthly to ensure the linen being stored according to written policy by Ministry of Health and the results were satisfactory⁵.

CONCLUSIONS

Linen storage is a clean area. It is vital to ensure suitable environment for linen storage. Providing clean and non-contaminated linen to the patient is crucial to prevent healthcare associated infection and outbreak.

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