INTRODUCTION

There is growing evidence that hospital sinks and drains may be reservoirs for Gram-negative bacteria, which can be transmitted to patients [1,2]. The formation of biofilm in sink drains can protect bacteria from complete eradication with cleaning and disinfection (Image 1). Acting on a report from another Toronto facility implicating a sink drain in transmission of carbapenemase-producing Enterobacteriaceae (CPE) to a hospitalized patient, we began to systematically culture sink drains after they were exposed to patients colonized with CPE.

MANAGEMENT OF CPE POSITIVE PATIENTS

At Mount Sinai Hospital (MISH), patients with risk factors for CPE are screened on admission via nasal swab. Patients considered to be at risk for CPE are those who have had a previous hospital admission (within or outside of Canada), or who have travelled outside of North America and Northern Europe in the past two years. CPE patient management:

- Private room with contact precautions
- Dedicated mobile medical equipment
- From outlet to wall resulted in subsequent cultures from the sink drain being negative. In one sink with an overflow, replacement of the sink was also required before negative cultures were achieved.

- In a single case, a sink with an overflow remained culture negative after steam cleaning.

CONCLUSIONS

- We have documented repeated – although not common – contamination of sink drains in rooms exposed to patients colonized and/or infected with CPE. A sample is also collected from the perimenter and inside of the hole with a second cotton-tipped swab.

- Swabs are collected in a Gram stain to look for CPE. In one case, the organism and the enzyme from the sink matched that of the patient previously admitted to the room.

- In one single sink, with an overflow remained culture negative after steam cleaning.

REFERENCES


Figure 2: Median length of stay of patients in rooms by contamination status of drain (p=0.56).

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