First Report of Metallo-Beta-Lactamase Producing Enterobacteriaceae Outbreak Due To A Cold Tea Dispenser in Hospital

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Background
The spread of metallo-beta-lactamase (MBL)-producing Enterobacteriaceae (CRE) is now recognized as an emerging global threat. Of the CRE organisms found in Japan less than 1% have been reported in the various healthcare settings including pediatric ward. Environmental surveillance cultures for Metallo-beta-lactamase (MBL) have been reported in the various healthcare settings including pediatric ward. During an outbreak of MBL-PE at a children’s hospital between May, 2014 and December, 2014, the outbreak investigation was undertaken.

Methods
• Design: Outbreak investigation and retrospective cohort study
• Setting: Tokyo Metropolitan Children’s Medical Center, Tokyo, Japan
• Study Period: May 2014 through December 2014
• Index Case: The primary case was a 20-year-old man. His rectal culture incidentally revealed MBL-PE.

Outbreak Investigation:
• Surveillance cultures for MBL-PE: Weekly rectal swabs
• Environmental surveillance cultures: Eight times from the ward
• MBL confirmation: SMA test followed by PCR and whole genome sequence

Retrospective cohort study
• Case patients: Patients with MBL-PE isolated at the ward
• Negative patients: Patients with negative for MBL-PE at the ward

Conclusions
• This is the first report of a contaminated tea dispenser in a hospital being associated with an MBL-PE outbreak.
• Awareness of the potential for transmission of MBL-PE via such routes should be increased.
• Handling equipments for foods and drinks should be cautiously and centralized to avoid contamination.

References:
1 MMWR Morb Mortal Wkly Rep 2013; 62(9): 165-70