Transmission of multidrug-resistant organisms via contaminated duodenoscopes

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1. Introduction
- Complication rates after esophageal or integrative choledochopancreatography (EUS-ERCP):
  - 8%: General
  - 5% to 7%: Infections or perforation
- Business losses for EUS-ERCP are extremely difficult to assess.
- Reported complication rates for esophageal cholangitis range from 3% to 10% of patients.
- The use of flexible instruments can result in local and systemic infections.

2. Aim
- To examine the association between post-ERCP infections and endoscope reprocessing lapses.

3. Methods
- Searched PubMed articles and other resources reprocessing lapses reported during 2006-2012 that involved patients exposed to contaminated endoscopes.
- Reviewed reports that described post-ERCP infections.
- Identified evidence linking effective transmission to improperly cleaned or disinfected duodenoscopes.

4. Results
- Post-ERCP infections associated with reprocessing lapses occurred in several institutions (Table 1).
- Various types of institutions were involved.
- Reprocessing errors were discovered in many cases.
- Lapses continued unabated for months in 1 case.
- Sixteen patients were exposed to potentially contaminated instruments.

5. Summary and Conclusions
- Reprocessing lapses resulting in duodenoscope contamination with exogenous pathogens, including MDR organisms, have led to serious ERCP-associated infections affecting numerous patients.
- Genetic testing has confirmed the transmission of exogenous pathogens from contaminated duodenoscopes to patients.
- Guidelines should be revised to reflect high attack rates and the need for patient follow-up when reprocessing lapses occur.
- Routine monitoring is recommended to detect reprocessing errors and endoscope contamination prior to patient exposure.