

**946. An Outbreak with Multidrug-Resistant *Klebsiella pneumoniae* Associated with Endoscopic Retrograde Cholangiopancreatography**  
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**Background.** Between December 6, 2012 and January 10, 2013, Carbapenem-resistant *K. pneumoniae* (CRKP) was cultured from 5 patients staying on the nephrological ICU (ward A) in a 3,095 bed tertiary hospital. A multiplex PCR testing for Carbapenemase genes yielded a positive result for Oxa-48. Four weeks after the last CRKP was detected on ward A, additional 5 cases of Oxa-48-CRKP emerged on different locations of the hospital - three patients in a haemato-oncological unit (ward B), one patient in a surgical ICU (ward C) and one further patient in anaesthesiological ICU (ward D).

**Methods.** An outbreak investigation starts with record reviews, environmental testing and typing of pathogens.

**Results.** As 4 patients (1 from ward A, 1 from ward B and the 2 single patients from wards C and D) underwent duodenoscopy for ERCP, the endoscopy records were reviewed. Reviewing the endoscopy records revealed that the same duodenoscope had been used for these 4 CRKP patients. The review of the endoscope records identified 22 additional patients who underwent ERCP with the respective duodenoscope, of which 19 were still available for rectal screening. From 2 of these patients, CRKP were recovered from the rectal swabs. The environment of the endoscopy unit was sampled, as were all duodenoscopes of the unit. The flushing solutions and the swabs from the respective duodenoscope grew no CRKP, nor did the samples from the other duodenoscopes or the environment of the endoscopy unit. Only enterococci were cultured from the flushing solution of one of the other duodenoscopes as an indicator of an insufficient reprocessing process. Typing of the 12 CRKP strains (5 from ward A, 3 from ward B and the 4 patients with ERCP) revealed that all of them were closely related (in AFLP and PFGE). Apart from the ERCP procedure using the same duodenoscope, the review of the medical records did not develop any further linkage between the patients from wards A and B and the four single CRKP cases.

**Conclusion.** In this outbreak of CRKP, 6 of 12 CRKP cases occurred after the patients underwent an ERCP procedure using the same duodenoscope. Accurate and stringent reprocessing of endoscopic instruments is extremely important, which is especially true for more complex instruments like the duodenoscope involved in the outbreak described here.

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