

[HYGEA (Hygiene in Gastroenterology - Endoscope Reprocessing): Study on Quality of Reprocessing Flexible Endoscopes in Hospitals and in the Practice Setting]

[Article in German]

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The quality of reprocessing gastroscopes, colonoscopes and duodenoscopes in daily routine of 25 endoscopy departments in hospital and 30 doctors with their own practices was evaluated by microbiological testing in the HYGEA interventional study. In 2 test periods, endoscopes ready for use in patients were found contaminated at high rates (period 1: 49 % of 152 endoscopes; period 2: 39 % of 154 endoscopes). Culture of bacterial fecal flora (*E. coli*, coliform enterobacteriaceae, enterococci) was interpreted indicating failure of cleaning procedure and disinfection of endoscopes. Detection of *Pseudomonas* spp. (especially *P. aeruginosa*) and other non-fermenting rods - indicating microbially insufficient final rinsing and incomplete drying of the endoscope or a contaminated flushing equipment for the air/water-channel - pointed out endoscope recontamination during reprocessing or afterwards. Cause for complaint was found in more than 50 % of endoscopy facilities tested (period 2: 5 in hospitals, 25 practices). Reprocessing endoscopes in fully automatic chemo-thermally decontaminating washer-disinfectors with disinfection of final rinsing water led to much better results than manual or semi-automatic procedures (failure rate of endoscopy facilities in period 2 : 3 of 28 with fully automatic, 8 of 12 with manual, 9 of 15 with semi-automatic reprocessing). The study results give evidence for the following recommendations: 1. Manual brushing of all accessible endoscope channels has to be performed even before further automatic reprocessing; 2. For final endoscope rinsing, water or aqua dest. Should only be used disinfected or sterile-filtered; 3. Endoscopes have to be dried thoroughly using compressed air prior to storage; 4. Bottle and tube for air/water-channel flushing have to be reprocessed daily by disinfection or sterilization, and in use, the bottle have to be filled exclusively with sterile water. The HYGEA study shows that microbiological testing of endoscopes is useful for detection of insufficient reprocessing and should be performed for quality assurance in doctors' practices, too. The study put recommendations for reprocessing procedures in more concrete terms.

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