How to remove all those Bugs after using an Endoscope

Presented by F. Kies / 2007 - sponsored by BHT Hygienetechnik GmbH
Problems with Endoscopes

Endoscopes
- penetrate body cavities which could have colonised microbial organisms
- can cause infections for both personal and patients
- are sensitive to temperature and mechanics
- channels are extremely difficult to clean
Considerations

Technical:
- Number of Channels
- Internal Deviations
- Different Sizes
- Different Connections

Safety:
- Hazardous Chemicals
- Hazardous Microorganisms
<table>
<thead>
<tr>
<th>AER System</th>
<th>Characteristics</th>
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| Single Channel Adaptation with Channel Check (<10% Blockage) | • **Individual Connections** to each Channel  
• When required with **Channel Separators**  
• System accepts (“Go”) endoscope only, if check shows **restriction of flow below specified value** |
| Single Channel Adaptation with Simple obstruction test (>80% Blockage) | • **Individual connections** to each channel or group of channels  
• Most systems **without Channel Separation**  
• System accepts (“Go”) endoscope even with **up to 80% blockage** of an endoscope channel |
| Single Channel Adaptation | • **Individual Connections** to each channel or group of channels  
• **No checking of restrictions** |
| Pressure Box System | • **No individual connection of channels**  
• **No checking of restrictions** |
Manual Pre-Cleaning

Following the intervention, the outer surface of the endoscope is to be wiped with a lint-free cloth.

Most endoscope manufacturers recommend additionally that it is flushed with a pre-cleaning rinsing agent.

Then it should be transported in a special transport container to the reprocessing area.
Fully Automatic Washer-Disinfectors for Flexible Endoscopes

**Process Steps:**

- Leak test
- Pre-rinse
- Cleaning with chemical solution
- Disinfection with chemical solution
- Final Rinse with disinfected purified water
- Drying
- Documentation
Automatic Endoscope Reprocessors - AER´s
With pressure box system
Reprocessing

After the pre-cleaning, the flexible endoscope is to be loaded into the automatic endoscope reprocessor for washing and disinfection.

Photos show pressure box system
Endoscope WDs / AERs with individual connections
Endoscope WDs / AERs with individual connections

1. Place Endoscope in Load Carrier
2. Connect individually
3. Connect Multi-Connection Plug
4. Select and start processing program (either manually or using bar-code reader)
Documentation

Printer (Standard)

Paper print-out of Charge Data

Datum: 30-10-97
Zeit: 14.30
Maschinennummer: 000000134
Programmnr.
Chargenr.
Lamfzeit: 113
25 min

Endoskop 1 Nr. 1111111111
Endoskop 2 Nr. 2222222222
Druckprüfung Endo 1 ok
Druckprüfung Endo 2 ok

Pumpendruck 0,3 bar

Chemische Desinfektion

Temperatur: 55°C
Haltezeit: 5 min.
Dosierer: 1
Dosiermenge: 150 ml.
Documentation

Bar-code Reading (Option)

Identification of Endoscopes
Storage

When the cycle is completed without any errors, the endoscope can be used for the next patient. If the endoscope is not directly re-used after the reprocessing, it should be stored in a special endoscope (drying) cabinet.
Crush

Demolish

Destroy

Thank you for your attention!
Now let’s get rid of those bugs . . .