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Endoscopes that Complete Pre-Cleaning may be Stored Overnight until Next Morning for the Subsequent Reprocessing

Soo-Jeong Cho

Department of Internal Medicine and Liver Research Institute, Seoul National University Hospital, Seoul National University College of Medicine, Seoul, Korea

See “Does the Reprocessing of Endoscopes Have to Take Place Immediately after Pre-Cleaning? A First Evaluation” by Vanessa M Eichel, Jonas M Jabs, Samy Unser, Nico T Mutters, Martin Scherrer, on page 526-533.

Professional reprocessing of flexible endoscopes is essential to prevent infection and for patient safety. Recently, the reprocessing process of endoscopes has been emphasized because of multiple outbreaks of multidrug-resistant organisms caused by inadequately reprocessed endoscopes.¹⁻³ The reprocessing procedure comprises six stages: pre-cleaning, cleaning, disinfection, rinsing, drying, and storage. In the case of flexible endoscopes, a pre-cleaning or bedside cleaning process must be conducted immediately after use to remove coarse contaminants such as blood and tissue. The time interval of interim storage is not specified in most guidelines on endoscope reprocessing, including guidelines in the Republic of Korea,^{4,5} or they propose short periods between 30 min and 3 h.⁶⁻⁹ Empirical studies on the effects of postponement on the reprocessing quality are not available. Due to these vague time frames, endoscope reprocessing can be troublesome after performing urgent endoscopy during weekends or night shifts. The study by Eichel et al.¹⁰ aimed to investigate the influence of postpon-

ing reprocessing on its quality after pre-cleaning of the flexible endoscopes. Residual protein content, germ load, and biofilm formation by photometry of crystal violet staining were tested, to evaluate performance efficacy of cleaning and disinfection, according to the time interval in the study.¹⁰ All test tubes and flexible endoscopes showed residual protein content and germ load significantly below the legally prescribed threshold values, independent of the interval between pre-cleaning and subsequent reprocessing process. In the study, biofilm was formed during storage after pre-cleaning, although it can be removed by brushing afterward. This study is the first to evaluate the effect of storage between pre-cleaning and subsequent reprocessing process. This study also suggested that endoscopes that complete pre-cleaning may be stored overnight until next morning for the rest of the reprocessing. However, to adopt this postponement strategy, thorough manual brushing should be ensured to remove biofilm that might have been formed during the storage without cleaning and disinfection. In addition, the number of repetitions is still too small to conclude sufficiency of the reprocessing quality, especially for storage time durations longer than 16 h. Duodenoscopes that require critical reprocessing procedures were not included in this study. This study suggests that cleaning and disinfection may be delayed until next morning after pre-cleaning of contaminated endoscopes, especially in the emergency setting, which enables reduction of cost as well as human resources. However, further study is needed to apply this strategy in real clinical practice.

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Correspondence: Soo-Jeong Cho
Division of Gastroenterology, Department of Internal Medicine and Liver Research Institute, Seoul National University Hospital, 101 Daehak-ro, Jongno-gu, Seoul 03080, Korea
Tel: 82-2-2072-4073, Fax: 82-2-762-9662, E-mail: crystal522@daum.net
ORCID: <https://orcid.org/0000-0001-7144-0589>

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Conflicts of Interest _____

The authors have no potential conflicts of interest.

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ORCID _____

Soo-Jeong Cho: <https://orcid.org/0000-0001-7144-0589>

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