[High Priority] - H0631 : [COVID-19] Considerations for Endoscopy Procedures [ECRI Exclusive Hazard Report]

Medical Device Hazard Report

Published: Thursday, July 9, 2020

UMDNS Terms:

- Bronchoscopes [10491]
- Colonoscopes [10950]
- Cystoscopes [11112]
- Duodenoscopes [11359]
- Gastroscopes [11856]
- Sigmoidoscopes [13594]
- Ureteroscopes [15788]

Geographic Regions: Worldwide

Suggested Distribution: Clinical/Biomedical Engineering, Infection Control, OR/Surgery, Pulmonology/Respiratory Therapy, Urology, Gastroenterology, Central Sterilization Reprocessing

Problem:

1. Extensive community transmission of the SARS-CoV-2 virus has resulted in a patient surge and has altered care practices in many healthcare facilities.
2. While elective surgical procedures have been deferred, endoscopy departments may still need to perform procedures on high acuity patients.
3. Healthcare personnel may be exposed to SARS-CoV-2 while performing non-elective/emergent endoscopy procedures on confirmed and/or asymptomatic COVID-19 patients.
4. Changes in procedure room cleaning should be considered.

ECRI Recommendations:

For healthcare personnel responsible for triage:

1. During times of outbreaks, PPE shortages, and as recommended by the CDC and local officials, avoid elective endoscopic procedures. If the procedure can be safely delayed without patient harm, it should be postponed. [1-5]
    1. It may be useful to classify procedures into non-urgent/postpone and non-urgent/perform. [2]
        1. Examples of non-urgent cases that may be performed include cancer staging and prosthetic removal. All screening, breath tests, most surveillance, motility, and capsule endoscopy procedures should be delayed. Many diagnostic procedures, including evaluation of chronic GERD, abdominal pain, and diarrhea, may be postponed as well. [2]
    2. Consider the AGA's flowchart for determining whether a procedure should be performed. [5]
2. Patients should be screened for their risk of COVID-19 infection the day before and the day of the procedure. [2,3]
    1. Patients should be asked about history of fever or respiratory symptoms, family members or close contacts with similar symptoms, any contact with a confirmed case of COVID-19, and recent travel to a high-risk area. [2,6]
    2. Follow temperature screening procedures as decided by your facility and test all patients for COVID-19 if highly accurate rapid testing is available. [2]
3. Caregivers and relatives of patients should not be allowed in the endoscopy department. [2]
4. Keep all patients at an appropriate distance from each other (6 feet is recommended) throughout the entire time in the endoscopy unit. [2,6]
5. Consider tracing staff contact with patients and contacting patients at 7 and 14 days after their procedure to ask about new diagnosis, or development of symptoms, of COVID-19. [6, 7]
6. Consider scheduling patients who have tested positive for COVID-19 later in the day, after procedures for patients who have tested negative for COVID-19. This may help reduce the risk of exposure for COVID-19-negative patients.

For healthcare personnel responsible for endoscopy procedures:

1. To conserve PPE and limit potential exposure during times of outbreaks and PPE shortages, only allow essential and fully trained personnel to be present in the endoscopy room. [1,7]
2. Institutions should evaluate their ability or level of preparedness to provide endoscopy to patients at a high risk or positive for COVID-19 in the absence of negative-pressure rooms suitable for endoscopic procedures. If possible, these patients should be transferred to an institution with a negative-pressure endoscopy room in emergency situations. [9]
    1. If patients are high risk or positive for COVID-19 and require endoscopy, and a negative-pressure room is not available, consider the following alternative measures for minimizing the potential for airborne virus remaining in the room:

    1. Dilute the air in a space with cleaner air from outdoors, [9]
    2. Use a portable negative-pressure machine, and/or
    3. Use an air scrubber with HEPA filtration.

3. Endoscopy procedures should be considered aerosol generating procedures [10,11] and proper PPE should be used.
    1. Proper PPE includes gloves, surgical gown, and face/eye protection (goggles or disposable face shield). [12]
    2. Endoscopists should double-glove during procedures regardless of a patient's COVID-19 status. [5]
    3. Healthcare workers performing endoscopy procedures should use an N95 respirator (or N99, or PAPR), regardless of a patient's COVID-19 status. [5] ECRI recommends that PPE should be rated for droplet protection, such as a surgical N95 respirator or an N95 respirator used with a droplet protection layer (e.g., surgical mask, face shield). However, droplet precaution alone is not sufficient. Healthcare workers should not use surgical masks as a substitute for N95 respirators during procedures in patients with confirmed or presumed COVID-19. [5]
    4. A guide to proper extended use and reuse of PPE is provided by the CDC; each institution may have its own policy. [8]
    5. Donning and doffing of PPE should follow CDC guidelines . [13]
4. For patients who have tested positive for COVID-19, consider performing the procedure at the bedside, if possible. [7] To minimize the potential for airborne virus to remain in the room the following should also be considered:
    1. Diluting the air in a space with cleaner air from outdoors [9],
    2. Using a portable negative-pressure machine, and/or
    3. Using an air scrubber with HEPA filtration.
5. Since the virus has been found in multiple cells in the gastrointestinal tract and all bodily fluids including saliva, enteric contents, stool and blood, the use of surgical energy should be minimized. [14,15]
6. Endoscopic procedures that require additional insufflation of CO_2 or room air by additional sources should be avoided until we have better knowledge about the aerosolization properties of the virus. This would include many of the endoscopic mucosal resection (EMR) and endoluminal procedures. [16]
7. Removal of caps on endoscopes could release fluid and/or air and should be avoided. [16]

For personnel responsible for procedure room cleaning:

1. Perform meticulous cleaning of room after each procedure, which includes cleaning of all high-touch and horizontal surfaces in procedure rooms with a disinfectant from the U.S Environmental Protection Agency (EPA) published List N: EPA's Registered Antimicrobial Products for Use Against Novel Coronavirus SARS-CoV-2, the cause of COVID-19 . [17]
2. Medical waste and linen should be removed from each room according to endoscopy unit policy. [18]
3. Staff involved in the cleaning of endoscopy rooms should adhere to the standard recommended practices for PPE, including the use of head cover, gown, surgical mask, eye-protection, and gloves. [18]
4. Each endoscopy unit should create a plan for cleaning and disinfecting the entire unit at the end of the day. [2, 18] The plan should be consistent with standards and recommendations for terminal cleaning of procedure rooms.
5. For procedure rooms used with a known COVID-19 case:
    1. Refer to ECRI's alert regarding Routine and Terminal Cleaning of Suspected or Confirmed COVID-19 Patient Rooms.
    2. After the procedure, extra time should be allowed to permit air changes to remove potentially infectious particles from the room. Adequate aeration time should be determined by the individual facility. [18]
    3. If negative-pressure rooms are used, as have been advised by the CDC, aeration time may be abbreviated. [18].
    4. Complete steps 1 through 4 as described above.

Background:

The American Society of Gastrointestinal Endoscopy and American Gastroenterological Association are offering guidance for resuming endoscopy and practice operations after the COVID-19 pandemic. [19,20]

References & Source Documents:

1. http://www.worldendo.org/wp-content/uploads/2020/04/200409_WEO-Advice-to-Endoscopists-COVID-19-Update-April-9-2020.pdf
2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7146697/pdf/main.pdf
3. https://www.sciencedirect.com/science/article/pii/S0016510720302455?via%3Dihub
4. https://www.giejournal.org/action/showPdf?pii=S0016-5107%2820%2934033-5
5. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7118600/pdf/main.pdf
6. https://www.asge.org/home/joint-gi-society-message-covid-19
7. https://www.esge.com/assets/downloads/pdfs/general/ESGE_ESGENA_Position_Statement_gastrointestinal_endoscopy_COVID_19_pandemic.pdf

8. https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html
9. https://www.asge.org/home/advanced-education-training/covid-19-asge-updates-for-members/asge-covid-19-frequently-asked-questions#what-ppe-should-be-worn-during-gi-endoscopy-and-endoscope-cleaning-and-hld-for-patients-classified-as-high-risk-for-covid-19
10. https://www.bsg.org.uk/covid-19-advice/gi-endoscopy-activity-and-covid-19-next-steps/
11. https://www.facs.org/covid-19/clinical-guidance/elective-case
12. https://www.cdc.gov/infectioncontrol/guidelines/isolation/appendix/standard-precautions.html
13. https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf
14. https://www.asge.org/home/joint-gi-society-message-covid-19
15. https://www.bsg.org.uk/covid-19-advice/gi-endoscopy-activity-and-covid-19-next-steps/
16. https://www.sages.org/recommendations-surgical-response-covid-19/
17. https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov
18. https://www.sages.org/management-endoscopes-reprocessing-storage-covid-19
19. https://www.asge.org/docs/default-source/default-document-library/asge-guidance-for-reopeningl_4-28-2020.pdf
20. https://www.dhpassociation.org/2020/04/27/aga-dhpa-resume-endoscopy-covid19/

Comments:

- This alert is a living document and may be updated when ECRI receives additional information.

Source(s):

- 2020 Jul 8. ECRI researched report