Percutaneous endoscopic gastrostomy tube placement in COVID-19 patients: Multidisciplinary approach

Percutaneous endoscopic gastrostomy (PEG-tube) placement is a relatively safe procedure for enteral nutrition in appropriately selected patients. Gastroenterologists are sought for PEG-tube placements in COVID-19 patients with vent-dependent respiratory failure. Although PEG-tube placement along with tracheostomy may expedite discharge planning, there are unique challenges for endoscopy staff because of the potential for viral transmission.[1] There is no gastroenterological society recommendation for a maximum duration of nasogastric (NG) or orogastric (OG) tube in critically ill patients. However, the general consensus is to wait about 4 weeks because of increased risk of complications beyond this duration.[2]

If a PEG-tube is deemed necessary, a multidisciplinary discussion (patient's family, primary, procedural, and palliative care teams) should be held to discuss risks and benefits of the procedure, nutrition goals, and overall prognosis (Table 1). Guidelines from the COVID-19 tracheostomy task force recommend waiting for at least 21 days before performing a tracheostomy.[3] A similar window period of 3–4 weeks for PEG-tube placement can be considered to avoid transmission. Patients' transport should be minimized to reduce the transmission risk; however, barrier methods (plastic patient-isolation drapes) should be used if deemed necessary. A small size hole (about 6 inches) can be made in the drape to access expected site of PEG-tube placement. All patients should receive prophylactic antibiotics as per guidelines. The "pull-technique" should be used while minimizing suctioning in addition to practicing "cluster care"[4] while performing other procedures/imaging needed for the patient (PEG-tube placement immediately before or after tracheostomy to minimize transport and exposure risk) (Table 2). In short, devising institutional guidelines regarding appropriate patient selection, optimizing the timing of PEG-tube placement along with tracheostomy if needed, while observing a multidisciplinary team approach, and minimizing endoscopic personnel during the procedure can decrease the exposure risk and improve patient care as well as free-up intensive care unit (ICU) resources.

Table 1 Advantages and disadvantages of endoscopic PEG tube placement for COVID-19 patients

Advantages	Disadvantages
1. Obtain a safe route of enteral nutrition without naso/oropharyngeal complications	1. Adverse events during PEG tube placement could further prolong hospital stay. However, very low rate.
2. Could aid in discharge planning	2. Data on risks of viral transmission to endoscopy staff, safety in COVID-19 patients, technical aspects, cost-effectiveness and duration of feeding is scarce
3. Nutritional improvement, functional recovery with rehabilitation in COVID-19 patients	3. Use of antibiotics and holding of anticoagulation prior to the procedure could potentially alter the course of COVID-19 infection
4. Advantage of providing medication and volume repletion through enteral route	4. COVID-19 patients with secondary infections should be evaluated for risk of invasive procedure like PEG tube placement
5. Preferred method of obtaining enteral access in patients with prolonged mechanical ventilation and nasal or oropharyngeal injury	

Advantages, disadvantages of PEG tube placement. Percutaneous gastrostomy (PEG) tube placement, coronavirus disease 2019 (COVID-19).

Table 2 Special considerations for PEG-tube placement in COVID-19 patients

Factors	Comments
Appropriate selection	• Patient selection is critical • Goals and objectives of the procedure should be based on the indication and contraindications
Indications	• Tracheostomy with a need for prolonged enteral nutrition • Inability to tolerate NJ/OG tube (displacement/ need for repeated imaging/ sinusitis/ oral-pharyngeal ulceration) • Expedite discharge planning to a long-term facility
Contraindications	• Cautious approach in patients on full-dose/therapeutic anticoagulation with higher bleeding risk, low chances of survival, and severe abdominal wound infection
Multidisciplinary approach	• Discussion between primary, procedural, and palliative teams and patient/family about the risks and benefits
Decrease movement	• Patients movement should be minimized whenever possible
Cluster method	• Tracheotomy and PEG-tube placement same day if possible
Procedure specifics	• Minimal use of staff, strict PPE use, and negative pressure rooms based on institutional policies and availability • Use of barrier protection (isolation drapes/C-cube/endoprotector) to decrease aerosolization risk

Percutaneous gastrostomy (PEG) tube placement. COVID-19, coronavirus disease 2019; NJ, Nasogastric; OG, Orogastric; PPE, personal protective equipment.

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