

FAQ Patient Care 5. When should nasogastric tube feeding or total parenteral nutrition be used in Ebola Treatment Units (ETUs)?

Use of nasogastric tube (NGT) feeding in ETUs

NGT feeding is indicated when a patient is too weak to eat/drink via the oral route or has major swallowing difficulties. Due to the unique risks and constraints associated with caring for patients with EVD, the use of NGT feeding in ETUs has been highly debated and policies/practices vary.

When an EVD patient could benefit from NGT feeding and tolerates NGT placement, use of an NGT can be considered. All surrounding factors, including context, staff ability and availability and patient condition must be considered in evaluating risk versus benefit. Risks for patients as well as staff must be taken into account.

ARGUMENTS AGAINST AND IN FAVOUR OF USING NGTs IN ETUS

Arguments against use of NGTs:¹⁻³

- There are barriers to verification of tube placement in the high-risk (red zone) setting.
 - Positioning of NGTs is difficult to monitor regularly as health staff have limited time.
 - Many ETUs have insufficient trained staff to insert and monitor NGTs.
- Patients with sore throat complain about the pain associated with NGTs.
- Some patients oppose insertion and retention of the NGT (and/or are confused), which increases the risk of tearing off staff protective gear during insertion and spraying the virus during removal.
- Severely ill patients who are bleeding and/or vomiting may experience harm from NGT placement.

Arguments in favour of using NGTs:

- NGT feeding maintains the benefits of the enteral route and avoids the risks associated with intra-venous (IV) catheter insertion.⁴
- NGT feeding allows for more complete nutritional products to be used than what can be provided through IV therapy.

In cases where placement of an NGT is considered, certain conditions must be met to ensure safe and effective use for feeding and hydration in an EVD patient.

Conditions for use of NGT feeding in an ETU^{2,4-6}

- The patient gives consent and tolerates NGT placement.
- The ETU is fully equipped with the appropriate supplies (proper sizes of NGTs, enteral feeding products, pH paper, stethoscopes, etc.).
- The ETU has sufficient and appropriate staff who are experienced in NGT insertion and monitoring.
- A procedure for establishing correct placement of NGT is in place. Testing pH of gastric aspirate via pH indicator strips/paper is recommended (along with checking via stethoscope).

The choice of whether to place an NGT should involve the patient (when possible) and different members of the medical/paramedical team (including doctors, nurses, nutritionists, etc.).

Extra note about use of NGTs: NGTs have also been used in ETUs for hydration/rehydration, and to administer water and/or oral rehydration solution in circumstances where adequate oral intake is not possible and where vascular access is difficult or unavailable.⁷ The decision to place an NGT for this purpose should be made in accordance with medical (rather than nutritional/dietary) protocols and recommendations.

Use of NGTs in children: NGT feeding may be considered on a case-by-case basis for children without vomiting who are too weak to eat or drink.⁷ However, NGT feeding should only be considered after other options, such as use of a cup, spoon and/or syringes have failed to provide results.⁸ Furthermore, it is important to ensure that a child's dislike of a particular food is not mistaken for poor appetite.

Use of total parenteral nutrition (TPN) in ETUs

In past outbreaks, the use of total parenteral nutrition (TPN) in the treatment of EVD only took place in high-resource settings. Case reports have mentioned TPN⁹⁻¹¹ but generally lack details or conclusive evidence regarding the benefit to patient outcome.

TPN is not only expensive to purchase but also costly in terms of its implementation and human resources needs, as administration requires specific equipment, nutritional products, the ability to perform multiple laboratory tests and very intensive monitoring by clinical staff⁹.

Furthermore, in a low-resource setting there is concern about the risk of hospital-acquired infection, including fungal infections for which laboratory diagnostic capacity may be limited and required antifungals may not be available. Other complications reported in general use include both fluid overload and dehydration, electrolyte disturbances and refeeding syndrome.¹²

Any potential benefits of TPN use would have to clearly outweigh risks and costs, which is often not the case. Use of TPN is therefore discouraged in ETUs in low-resource settings.

References

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