ESPEN GUIDELINE ON HOME ENTERAL NUTRITION

S. Bischoff (DE)
ESPEN Guideline

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# DISCLOSURE OF INTEREST

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ESPEN guideline Home Enteral Nutrition

- 61 Recommendations, 17 PICO questions, 5 chapters

- 11 Working group members:
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Guideline development process

• Methodology: ESPEN guidelines SOP¹
• Online voting: June 27th – July 25th July 2018
• Final Consensus Conference: Sep 2nd 2018,

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1. Indication and contraindication for HEN

2. Access devices for HEN

3. Products recommended for HEN

4. Monitoring and termination of HEN

5. Structural requirements to perform HEN

Figure 2
Figures 3-9
Figure 10
Figures 11-15
Figures 16-19
1. Indication and contraindication for HEN

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Figure 1
1. Indication and contraindication for HEN

**Indication**

**R1:** HEN should be offered to patients at nutritional risk or malnourished who cannot meet their nutrient requirements by normal dietary intake, who have a functioning gastrointestinal tract, who are able to receive therapy outside of an acute care setting, and who agree and are able to comply with HEN therapy with the goal of improving body weight, functional status or QoL.

**R2:** Prior to discharge from hospital of patients at risk of malnutrition (e.g. patients with neurological disease, head injury, head and neck cancer, gastrointestinal and other malignancies, non-neoplastic gastrointestinal disease including malabsorptive syndromes), either oral nutritional supplements or HEN should be considered.

**R3:** If life expectancy is estimated to be less than one month, HEN usually shall not be initiated.

**Contraindication**

**R4:** HEN shall not be performed in patients with contraindications such as severe functional disturbances of the bowel, gastrointestinal obstruction, gastrointestinal tract bleeding, severe malabsorption or severe metabolic imbalances.

**R5:** If patient and/or their legal carers do not agree to a HEN program or are unlikely to comply with and/or if there are organizational/logistic problems which cannot be overcome, HEN should not be offered.

Figure 2
1. Indication and contraindication for HEN

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Figure 1
2. Access devices for HEN

- 2.1 Access devices
  - Figure 4

- 2.2 Handling of tubes, exit sites and consumables
  - Figures 5+6

- 2.3 Start of HEN
  - Figure 7

- 2.4 Administration
  - Figure 8

- 2.5 Drug administration
  - Figure 9
R6: HEN can be delivered through a nasal feeding tube in patients who need HEN only for a short period of time (up to 4-6 weeks).

R7: A PEG or, if indicated, a percutaneous endoscopic jejunostomy (PEJ) is the preferred access device and should be placed when long-term HEN is required.

R8: A PEG should be preferred over a surgical gastrostomy for long-term HEN, mainly due a lower complication rate, cost-effectiveness and operating time.

R9: If a PEG if not suitable for long-term HEN a percutaneous laparoscopic assisted gastrostomy (PLAG) may be a safe alternative.

R10: RIG* or PRG* can be used as alternative techniques for the placement of a feeding tube into the stomach, if an endoscopically guided tube placement cannot be performed.

R11: In case of inadvertent displacement or removal of the PEG more than four weeks after initial placement, direct replacement can be safely attempted before the track closes completely.

*RIG: radiologically inserted gastrostomy
PRG: percutaneous radiological gastrostomy
2.2 Handling of tubes, exit sites and consumables

R12: Until the stoma tract is formed and the incision is healed, the PEG exit site should be daily monitored and kept clean and dry by using aseptic wound care (usually up to 5-7 days post procedure).

R13: A glycerin hydrogel or glycogel dressing should be used as an alternative to classical aseptic wound care during the first week(s).

R14: After stoma healing, dressings can be reduced to one or two times a week, and the entry site can be cleansed using soap and water of drinking quality.

R15: Alternatively to recommendation 14, dressings can be omitted and the site can be left open.

R16: Immediately after placement of the PEG, the external fixation plate should be subjected to very low traction, without tension.

R17: Once the gastrostomy tract has been healed (after about one week), the tube should be rotated daily and should be moved inwards at least once a week (at least 2 cm, up to 10 cm).

R18: After mobilization, the tube may be returned to its initial position with some free distance (0.5 - 1 cm) between the skin and the external bolster.

R19: If the device is a gastrojejunostomy or gastrostomy with jejunal extension it should not be rotated (only weekly pushed in and out).

R15: Alternatively to recommendation 14, dressings can be omitted and the site can be left open.
2.2 Handling of tubes, exit sites and consumables

**Leakage**

- **R20**: In case of peristomal leakage of gastric contents at the stoma site, the surrounding skin can be properly protected using zinc oxide-based skin protectants.

- **R21**: Proton pomp inhibitors can be used for decreasing leakage by minimizing gastric acid secretion and – if used – needs to be reviewed regularly.

**Granulation**

- **R22**: Excessive granulation tissue is a common problem of PEG and should be avoided or treated using appropriate methods.

**Tube defect**

- **R23**: Tube replacement should be accomplished in case of tube breakage, occlusion, dislodgement or degradation.

**Infection**

- **R24**: When a site infection is suspected or diagnosed, an antimicrobial agent can be topically applied to the entry site of the tube and the surrounding tissue, and – if the site infection cannot be resolved by this treatment – combined with systemic broad-spectrum antibiotics.

- **R25**: If the infection cannot be resolved by the procedure described in Recommendation 24, the tube should be removed.

Figure 6 Complications
R26: HEN may be started when patient is medically stable and (i) correct placement of the tube position is verified; (ii) tolerance to enteral prescription (volume and formula) is demonstrated; and (iii) the patient and/or provider have appropriate knowledge and skills to manage HEN.

R27: The patient with a nasogastric tube can start HEN immediately according to the previously established nutritional care plan once appropriate tube placement has been confirmed.

R28: Adults with uncomplicated gastrostomy tube placement can commence EN within 2 - 4 hours after the procedure.

R29: A graduated program of commencement of jejunal HEN feeds should be followed.
2.4 Administration

NST

Need of a pump

Water flushing

R30: The method of HEN administration should be a decision of the multidisciplinary NST involved with the patient care, considering patient’s disease, type of feeding tube in position, feed tolerance and patient preference.

R31: Bolus or intermittent continuous or continuous infusion through a pump may be used depending on clinical need, safety and level of precision required.

R32: Routine water flushing before and after feeding can prevent tube obstruction and should be part of patient/carer education.
2.5 Drug Administration

**R33:** An enteral tube being used for **EN can also be used for drug administration** if the efficacy of drug administration can be confirmed.

**R34:** If an enteral tube is used for drug administration, **adequate information** should be offered to patients and carers with the involvement of a pharmacist.

**R35:** **Appropriate ancillaries** including syringes shall be used for drug administration through enteral tubes using connectors of a recognized standard in order to avoid misconnection errors.

**R36:** Measures shall be taken to ensure **correct drug dosing** when drugs are administered through enteral tubes, for example when using low-dose tip ENFit syringes. Shaking of a low-dose ENFit tip syringe to remove a drug moat shall not be done.

**R37:** **The necessity and appropriateness for a drug** to be administered through an enteral tube should be confirmed, taking into account factors including any effect of the site of drug delivery and potential drug interactions with enteral formula and enteral feeding tubes.

**R38:** Drugs may be administered individually through an enteral feeding tube, and the **tube flushed** before, between and after each drug, using 30 mL of water.
1. Indication and contraindication for HEN
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Figure 1

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Figure 10
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Figures 16-19
3. Products recommended for HEN

**Standard situation**

- **R39**: Standard commercial formula enteral tube feeds can be used, unless there is specific justification for a blended tube feed.

- **R43**: For patients without diarrhea, constipation or diabetes, standard commercial tube feeds should be used according to the direction of a specialist.

**Special situations**

- **Diarrhea/Constipation**
  - **R40**: Fiber-containing feeds shall normally be used for patients with diarrhea.
  - **R41**: Fiber-containing feeds should be used for patients with constipation.

- **Diabetes**
  - **R42**: A modified enteral formula with lower sugar content, containing slowly digestible carbohydrates and a fat content enriched in unsaturated fatty acids, especially monounsaturated fatty acids may be used for patients with diabetes.
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2. Access devices for HEN

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5. Structural requirements to perform HEN

Figure 1
4. Monitoring and termination of HEN

4.1 When and how should patients prescribed HEN be monitored?

4.2 Termination

4.3 Management of complications

4.4 Assessment of QoL
4.1 When and how should patients prescribed HEN be monitored?

**R44**: HEN patients should be monitored for the efficacy and complications of HEN, which requires a good forward planning and communication between acting persons (physicians, nurses, caregivers etc.).

**R45**: Monitoring of efficacy should be based primarily on body weight, body composition and hydration status, but may also include laboratory measurements, such as serum albumin or transthyretin (=prealbumin). Monitoring of complications should include tube- and EN-associated complications.
Figure 13

4.2 Termination

R46: HEN should be terminated when the desired weight has been reached and the patient’s oral intake matches his/her maintenance needs.
4.3 Management of complications

**R47:** To reduce mechanical complications of HEN (blocking, dislodgement) **percutaneous tubes should be used** instead of nasal tubes for long-term needs (at least 4 - 6 weeks).

**R48:** As **home-made blenderized admixtures are less effective** than EN formula or commercially produced ‘whole food’ solutions, they should not be utilized in patients on HEN.

**R49:** As **home-made blenderized admixtures are less safe** than EN formula or commercially produced ‘whole food’ solutions, they should not be utilized in patients on HEN.

**R50:** A HEN team should adequately care of nasogastric and enteral tubes, as well as follow up the patients to decrease complications and rehospitalizations.
4.4 Assessment of QoL

**R51:** During HEN treatment QoL should be measured periodically.

**R52:** For evaluating QoL in HEN patients, validated specific questionnaires should be used.
1. Indication and contraindication for HEN
2. Access devices for HEN
3. Products recommended for HEN
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5.1 Education

R53: HEN should be standardized and coordinated by a multidisciplinary NST (physician, nurse, dietician, pharmacist) as this increases the quality of the measures, reduces the complication rates and thus makes a significant contribution to improve patients QoL and to the cost-effectiveness of the measures.

5.2 Infrastructure

R54: All information related to HEN should be provided not only verbally but also in writing or pictures.

5.3 Nutritional Support Team

R61: For optimal management of HEN, a NST approach may comprise – in addition to a physician, a dietician/nutritionist and a nurse – other allied healthcare professionals (for example, speech and language therapists, physiotherapists and occupational therapists, and pharmacists as necessary).
R55: All healthcare professionals who are directly involved in patient care should receive education and training, relevant to their duties, on the different aspects related to the safe provision of HEN and the importance of providing adequate nutrition.

R56: Healthcare professionals should ensure that all people who need nutrition support receive coordinated care from a multidisciplinary NST.

R58: The environment for patients receiving HEN should be safe in order to administer the EN without the risk of complications.

R59: Hygiene standards should be established to prevent contamination of the home enteral product and to prevent HEN-related infections.

R60: All patients receiving HEN should have access to a professional for evaluation of the procedure and, especially in case of complications or emergencies, for adequate intervention.

R57: All hospitals who discharge patients with HEN should employ at least one specialized nutrition support nurse or dietician. Ideally, these hospitals should have a NST working within the clinical governance framework.
Thank you!

Anna Schweinlin
ESPEN guideline office