

Administration of nutrition and drugs via percutaneous endoscopic gastrostomy

Percutaneous endoscopic gastrostomy or **PEG** is a medical procedure that can be used for placing a feeding set over the abdominal wall in the stomach. The introduction of PEG is considered especially in cases where long-term administration of enteral nutrition is expected (longer than 6-8 weeks), such as in cases of neurological diseases with swallowing disorders or tumors of the upper gastrointestinal tract.

Feeding via PEG

Nutrition regimen

When administering enteral nutrition via the percutaneous endoscopic gastrostomy, a **bolus (dose) method** using a *Janette syringe* is preferred, which is more natural for the stomach than the continuous method (used to administer nutrition to the intestine).

Nutrition composition

Nutrients are preserved in their original form (polymeric form). Therefore, the administered food contains intact proteins (especially casein), polysaccharides, and lipids (especially *long-chain triglycerides*). In the past, cooked mixed foods were commonly used. Nowadays, due to the fact that cooked food is not sterile and it cannot completely meet nutritional needs in terms of energy content, macronutrients, and micronutrients, it has been abandoned.

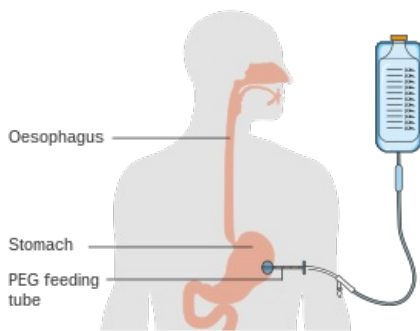


Diagram showing the location of PEG

Procedure for increasing the nutritional value of the administered food

For the first 24 hours after the feeding tube is inserted the patient receives **only tea**. The next day, feeding begins in the amount of **50 mL** every two hours. If the patient's feeding is well tolerated, the bolus volume is **increased by 50-100 mL per day**. The goal is to reach **250-400 mL** of nutrition at 2 to 3-hour intervals. The last daily dose is given approximately **2 hours before bedtime**, followed by a **night break**. If the patient's enteral feeding is combined with food intake **per os** (usually liquid or slurry form), then they should remain **separated by about 1 to 1.5 hours**.

Basic principles of administration

Before feeding, it is necessary to check that the stomach is not full: If the patient has a full stomach (raised abdomen or after opening the set, the stomach contents flow out), the application must be postponed. It is important to **rinse the feeding tube with 30-50 mL of tea or boiled water** before and after feeding. **Acidic solutions** (fruit juices, mineral water, etc.) **cannot be used** for rinsing due to the possibility of the coagulation of the food leading to **clogging the feeding tube**. It is also recommended that the patient sit or have at least an elevated upper body during nutrition and remain in this position for an **additional 30-60 minutes** after concluding administration. This reduces the risk of aspiration. After completion, it is necessary to close the set so that food or gastric juices cannot escape.

Medication administration via PEG

In situations where drugs cannot be administered orally, the drugs are administered via the PEG. Drugs in the form of drops or syrup are the most suitable for this method of administration. They are diluted with water or tea. If tablets are being used, they must first be crushed very finely to avoid clogging the feeding tube. The formed powder should be then dissolved in a small amount of tea or boiled water. The resulting solution is sucked into

Janette's syringe and is then injected into the feeding tube. It must be rinsed before and after the administration of the drugs. If the drugs in the feeding tube come into contact with food or substances that could cause clotting (such as mineral water, fruit juices, or other drugs), the feeding tube may become clogged.

References

Related Articles

- Nutritional propaedeutics

External links

- FLIEGELOVÁ, Marcela. *Enterální výživa* [online]. [cit. 2016-11-22]. <<https://el.lf1.cuni.cz/att00094/>>.
- NOVÁK, František. *Přístupy pro umělou výživu* [online]. [cit. 2016-11-22]. <<https://el.lf1.cuni.cz/att00226/>>.

Literature

- FLIEGELOVÁ, Marcela. *PEG z pohledu NT* [online]. [cit. 2016-11-25]. <<https://el.lf1.cuni.cz/att00190/>>.
- HOLUBOVÁ, Adéla – NOVOTNÁ, Helena. *Ošetrovatelská péče v gastroenterologii a hepatologii*. 1. edition. Praha : Mladá fronta, 2013. ISBN 978-80-204-2806-6.
- KOHOUT, Pavel – KOTRLÍKOVÁ, Eva. *Základy klinické výživy*. 1. edition. Praha : Forsapi, 2009. ISBN 9788087250051.
- KRÍŽOVÁ, Jarmila. *Enterální a parenterální výživa*. 2. edition. Praha : Mladá fronta, 2014. ISBN 978-80-204-3326-8.
- SVAČINA, Štěpán. *Poruchy metabolismu a výživy*. 1. edition. Praha : Galén, 2010. 505 pp. ISBN 978-80-7262-676-2.
- ZLATOHLÁVEK, Lukáš. *Klinická dietologie a výživa*. 1. edition. 2016. ISBN 978-80-88129-03-5.