

Lesson 3: Gastrografen

Aims

- Explain the following topics about Gastrografin:
- Properties
- Administration
- Indications
- Contraindications
- Hydration

Introduction

- Gastrografin is a contrast medium for the radiological examination of the gastrointestinal tract
- It can use in combination with barium sulphate.
- Properties:
 - Oral solution (Iodinated contrast agent)
 - High osmolar

Administration

- Oral
- Rectal
- Can we use Gastrografin as intravascular CM?
- No. because of additions.
- Contrast medium solution not used within 72 hours after opening the bottle must be discarded

Gastrografin

- It is primarily indicated in cases in which the use of barium sulphate is undesirable or contraindicated.
- Gastrografin can generally be used for the same purposes as barium sulphate.
- Exception: Visualization of mucosal diseases
- It is unsuitable for the diagnosis of enteritis

Indications

- Perforation
- Acute hemorrhage
- Suspected bowel obstruction
- Visualization of a gastrointestinal fistula
- Visualization of a foreign body or tumor before endoscopy

Indications ...

- Suspected partial or complete stenosis
- Megacolon
- After resection of the stomach or the intestine (danger of perforation or leak)

Further indications

- Treatment of uncomplicated meconium ileus
- Assessment of changes in the shape of the pancreas

Treatment of meconium ileus

- Gastrografin can be given by enema for non - operative treatment of an uncomplicated meconium ileus.
- ?
- Advantage is taken of the high osmotic pressure of the contrast medium

CONTRAINDICATIONS

- Hyperthyroidism
- Gastrografin must not be administered undiluted in patients with low plasma volume, as for example in:
 - Newborns
 - Children
 - Dehydrated patients
 - ?
- Hypovolemic complications can be particularly serious in these patients.

CONTRAINDICATIONS

- Gastrografin must not be administered undiluted in patients with suspected possibility of aspiration or broncho-esophageal fistula.
- ?
- Hyperosmolarity may cause acute pulmonary edema, chemical pneumonia, respiratory collapse and death.

Hydration

- Adequate hydration must be ensured before and after contrast medium administration.
- Disturbances of water and electrolyte balance must be corrected before the examination.

Hydration

- Hydration is important for:
 - elderly patients
 - small children
 - newborns
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- Infants (age <1 year) and especially newborns are susceptible to electrolyte imbalance and hemodynamic alterations.

Hydration

- Especially to patients with:
- Multiple myeloma
- Diabetes mellitus with nephropathy
- Polyuria
- Oliguria
- Hyperuricemia

Summary

- Properties
- Administration: Oral, rectal
- Indications
- Contraindications
- Importance of hydration

References

- Health Products Regulatory Authority, Summary of Product Characteristics, 2019, 1-9.
- <https://www.medicines.org.uk/emc/medicine/1820#gref>