Suukaudne kontrastaine kõhu KT uuringul

Kadri Toit

Pärnu 2023

Sissejuhatus

- Vanema generatsiooni KT masinad olid aeglasemad, tegid halvema resolutsiooniga ja vähemate kihtidega uuringud. Siis võeti kasutusele suukaudne positiivne KA.
- See oli/on standard ja parandas oluliselt diagnostilist täpsust.
- Uue generatsiooni KT masinatega on suukaudse positiivse KA vajadust uuritud vähe ja ainult vähestes haigusgrupides, peamiselt erakorralise kõhuvaluga patsientidel.
- Ravijuhendid jätkuvalt soovitavad kasutada oraalset KA:
  - European guidelines on quality criteria for computed tomography EUR 16262 (2000)
  - RECIST
  - “Recommendations for Cross-sectional Imaging in Cancer Management” Royal College of Radiologists (RCR)

Positiivsed ja neutraalsed kontrastained

- Baarium
- Diatrizoate Meglumine
- Veeslahustuv joodi lahus
- Vesi
- Mannitool
- Polüetüleen glükool

Positiivne oraalne kontrastaine

+ Abstsesside tuvastamine
+ Leke soolestikust
+ Soolefistulid
+ Intraluminaalsele kasvavad pehmekoelised tuumorid

- Varjatud GI veristsused
- Sooleisheemia tunnuste varjamine
- Ekstraluminaalsed lubjastused
- Pseudo-tuumorid

Neutraalne oraalne kontrastaine

+ Sooleisheemia
+ GI veristuste tuvastamine
+ Põletikulised soolehaigused
+ Soolte välised lubjastused

- Fistulid ja lekked
- Pehmekoelised soolesisesed tuumorid

Ilma suukaudse positiivse KA uuringute eelised

- Väiksem doos
- Patsiendile mugavam
- Odavam
- Vähem aega nõudev
- Paljudel juhtudel ei mõjuta diagnoosi

Eur Radiol (2015) 25:669–678
DOI 10.1007/s00330-014-3446-9

COMPUTED TOMOGRAPHY

Abdominal and pelvic CT: is positive enteric contrast still necessary? Results of a retrospective observational study

S. Kammerer · A. J. Höink · J. Wessling · H. Heinzow · R. Koch · C. Schuelke · W. Heindel · B. Buerke

- Uuriti 2008 patsienti
- Haiguste tuvastamine oli peroraalse kontrastainega parem.
- Positiivse ja neutraalse kontrasainel olulist vahet ei olnud.

Fig. 1 Abdominal CT scans with positive, neutral and without enteric contrast. Abdominal CT scans with positive (**a**), neutral (**b**) and without any orally applied enteric contrast agent (**c**). The intestine is opacified by positive contrast agent (**a**) or by mineral water. The intestinal loops are more distended owing to the orally applied contrast agent (**a**, **b**), compared to the examination performed without any enteric contrast (**c**)

Eur Radiol (2015) 25:669–678

Eur Radiol (2014) 24:2936–2944
DOI 10.1007/s00330-014-3285-8

COMPUTED TOMOGRAPHY

An evaluation of the use of oral contrast media in abdominopelvic CT

Erica Lauren Buttigieg · Karen Borg Grima · Kelvin Cortis · Sandro Galea Soler · Francis Zarb

- 46 pt, kellel oli tehtud oraalse postiivse KA uuring. Dünaamiline uuring tehti 21 ilma KA ja 25 tehti neurtraalse KA.
- Statistiliselt olulist vahet ei leitud.

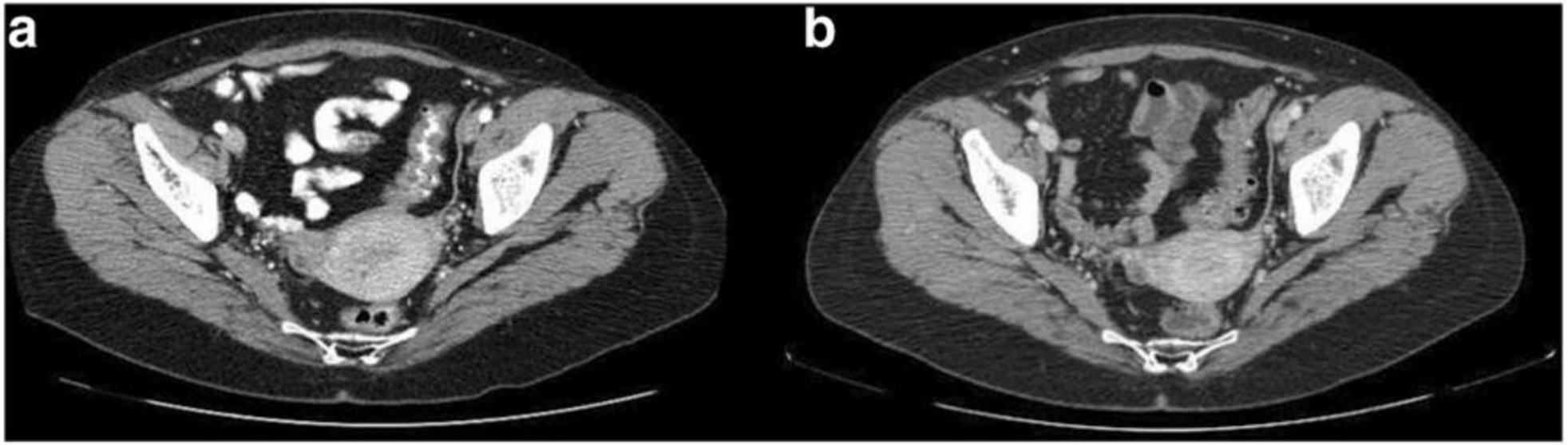

Fig. 4 **a** Control CT image with positive OCM in a female patient. The uterus can be easily visualised and discriminated from the adjacent bowel loops filled with high-attenuating positive OCM. However, mural detail cannot be appreciated. **b** Follow-up CT image with water in the same patient. The uterus may not be as easily discriminated from the adjacent bowel loops; however, mural detail of the bowel loops can be better appreciated in this context

Eur Radiol (2014) 24:2936–2944

Millal kasutada oraalset KA

- ACR Appropriateness Criteria
- Oral contrast must be given to patients with
  - Kõhnadel inimestle, BMI<25
  - Hiljutine abdominaalne operatsioon
  - Anamneesis varasem GI trakti muutev lõikus
  - Patientidel, kellele ei ole lubatud I/v-kontrastaine.
-

TABLE 1: Positive Oral Contrast Material Use at Abdominal CT: Indications, Contraindications, and Areas of Controversy

Positive Oral Contrast Material Use	Indication
Is generally indicated	Suspected postoperative bowel leak[a]
	Suspected gastrointestinal fistula[a]
	Suspected interloop abscess or other fluid collection[a]
	Oncologic staging and surveillance[a]
	CT colonography[b]
	Nonspecific abdominal pain or other symptoms (subacute)[a]
Is not helpful, is best avoided, or is contraindicated	CT enterography[c]
	Suspected mesenteric ischemia
	Suspected intraabdominal hemorrhage or gastrointestinal bleeding
	CT angiography
	Blunt abdominal trauma (acute)
	High risk for aspiration
	Hepatobiliary and pancreatic indications
	Genitourinary indications (urography, urolithiasis, renal and adrenal lesions)
Is an area of controversy	Nontraumatic abdominal pain (acute)
	Suspected appendicitis
	Suspected small-bowel obstruction
	Crohn disease (acute)
	Penetrating abdominal trauma

[a]Water-soluble nonionic contrast material is generally preferred.
[b]Both iodinated contrast material and barium contrast material are often combined for CT colonography.
[c]Neutral enteric contrast material is indicated.

https://doi.org/10.2214/AJR.19.21989

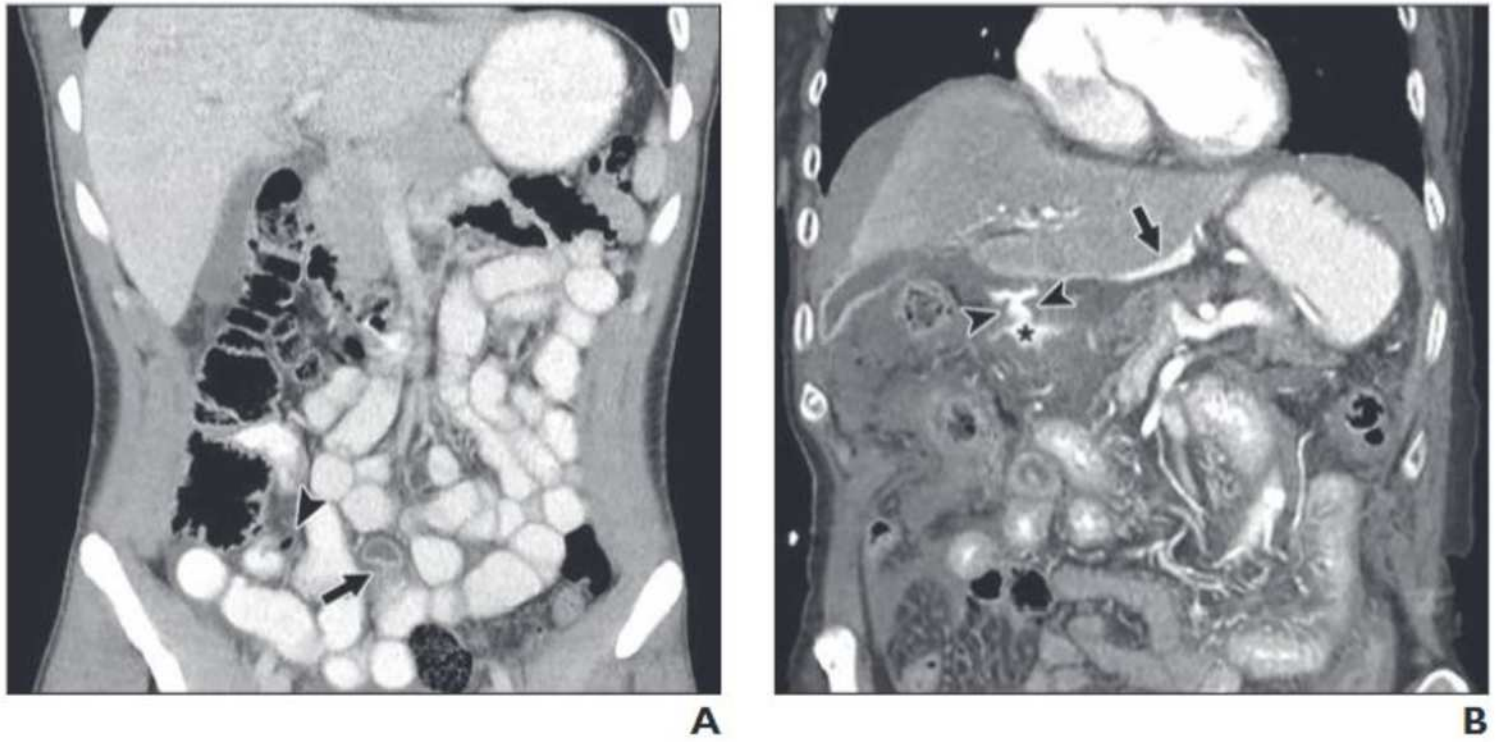

Fig. 9—Positive oral contrast material in setting of acute nontraumatic abdominal pain (nonappendiceal causes).

A, Coronal oral and IV contrast-enhanced CT image of 21-year-old man with right lower quadrant pain shows mildly inflamed, blind-ending loop of unopacified small bowel (*arrow*), extending off distal ileum. Confident detection of Meckel diverticulitis might have been much more challenging without positive oral contrast material opacifying adjacent normal small-bowel loops. Note also normal air-filled appendix (*arrowhead*).

B, Coronal oral and IV contrast-enhanced CT image of 68-year-old woman shows perforated benign peptic ulcer (*arrowheads*) in pyloric channel region that is outlined by positive oral contrast material. Extraluminal contrast material in lesser sac (*arrow*) surrounds undersurface of left hepatic lobe. Marked low-attenuation gastroduodenal wall thickening surrounds native lumen (*asterisk*), but other bowel loops appear thickened from associated peritonitis. Scan was obtained as CT angiogram to evaluate for aortic dissection after oral contrast material had already been administered. However, without use of positive oral contrast material in this case, the inadvertent diagnosis might have been quite difficult.

https://doi.org/10.2214/AJR.19.21989

Kirjandus

- **Positive Oral Contrast Material for Abdominal CT: Current Clinical Indications and Areas of Controversy.** Perry J. Pickhardt. *American Roentgen Ray Society 2020*
- **An evaluation of the use of oral contrast media in abdominopelvic CT.** Erica Lauren Buttigieg & Karen Borg Grima & Kelvin Cortis & Sandro Galea Soler & Francis Zarb. Eur Radiol (2014)
- **Abdominal and pelvic CT: is positive enteric contrast still necessary? Results of a retrospective observational study.** S. Kammerer & A. J. Höink & J. Wessling & H. Heinzow & R. Koch & C. Schuelke & W. Heindel & B. Buerke Eur Radiol (2015) 25:669–678
- https://www.acr.org/-/media/ACR/Files/Practice-Parameters/CT-Abd-Pel.pdf
- **Appropriate Use of Oral Contrast in CT Imaging** *M K Warfa, MD; A Goyal, MD ; H Arif Tiwari,MD; L M Burke, MD; A Z Kielar, MD; N Lalwani, MD*