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Abdominal Pain – possible causes and First Aid

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Learning objectives

1

Student will learn the possible most common causes of abdominal pain and some typical symptoms.

2

Student will learn the basic procedure of first aid for abdominal pain.

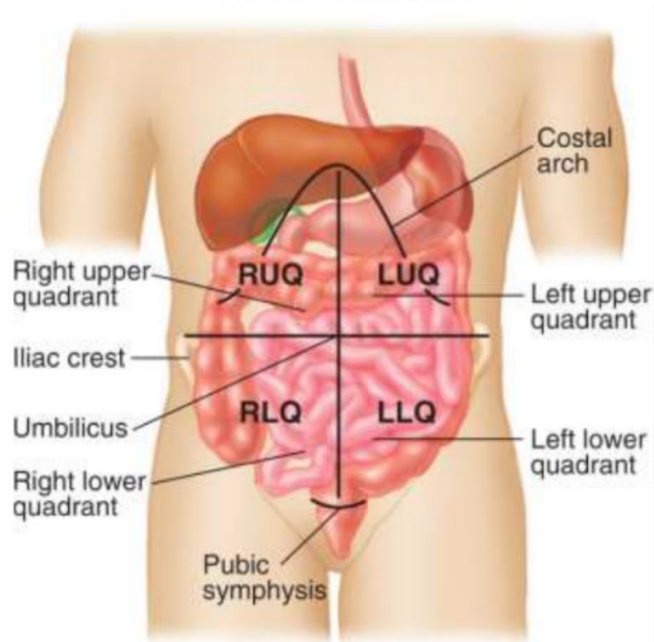
3

Student will learn in which case he or she should call 112 for a person with abdominal pain.

Basic abdominal anatomy

ABDOMINAL QUADRANTS

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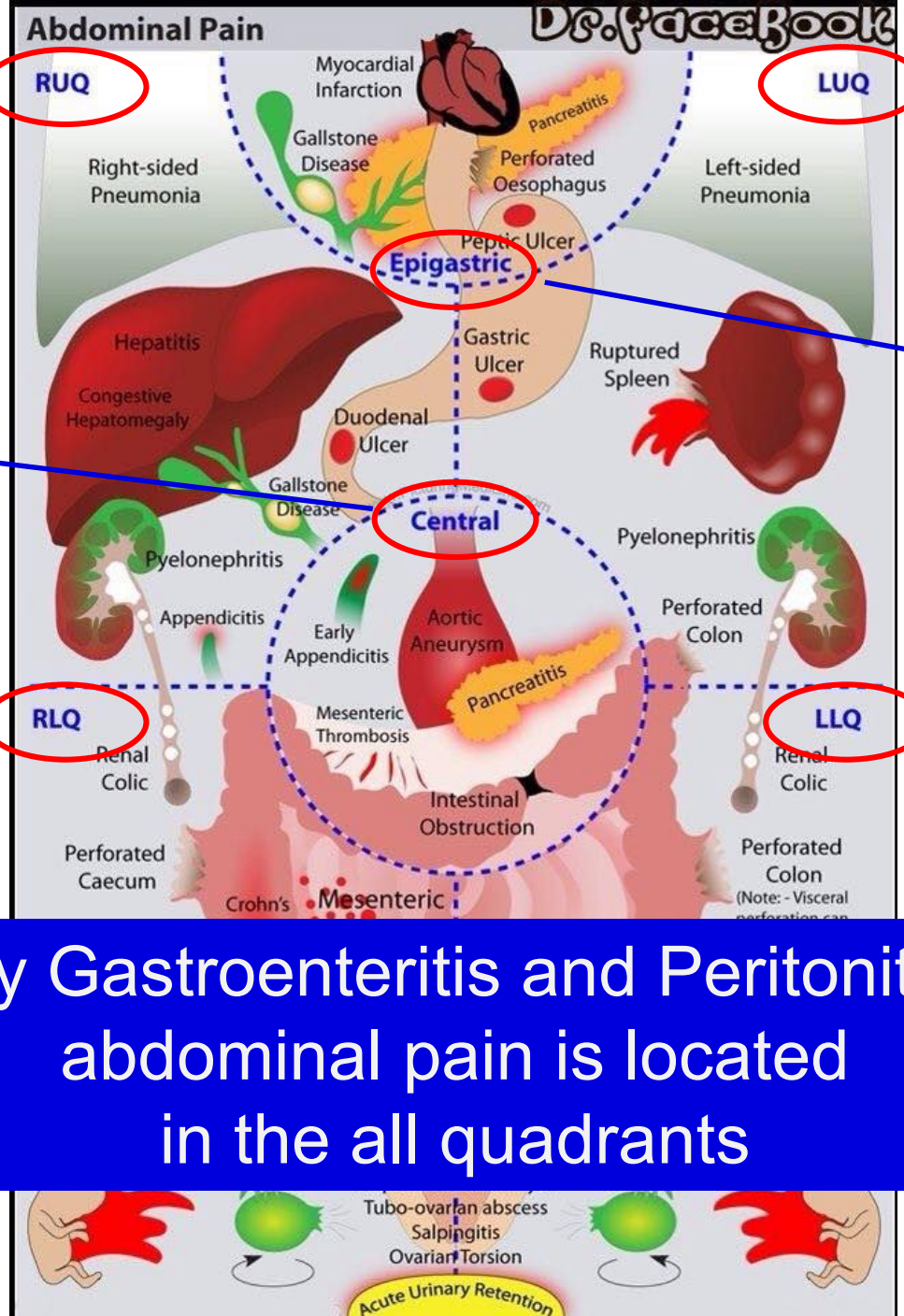


- RUQ = right upper quadrant
- LUQ = left upper quadrant
- RLQ = right lower quadrant
- LLQ = left lower quadrant
- Epigastrium = upper medial part of abdomen below costal arch
- Umbilical medial part

Gallstone Colic
Duodenal Ulcer

Ileus
Pancreatitis
Abdominal Aortic Aneurysm

Appendicitis
Renal Colic
Strangulated hernia
Ectopic pregnancy,
ruptured ovarian cyst,
ovarian torsion



Gastric Ulcer
Ruptured Spleen

Oesophageal Ulcer,
Varix
Heartburn
Myocardial Infarction

Constipation
Renal Colic
Strangulated hernia
Ectopic pregnancy,
ruptured ovarian cyst,
ovarian torsion

By Gastroenteritis and Peritonitis abdominal pain is located in the all quadrants

Typical symptoms; what to look for?

Pain?

How long? Where?
What kind?
Comfort position?

Vomiting?

Diarrhoea?
Constipation?

Bleeding?

Melena?
Haematemesis?

Trauma?

Mechanism of
injury?

Unconsciousness?

Signs of shock?

Pregnancy?

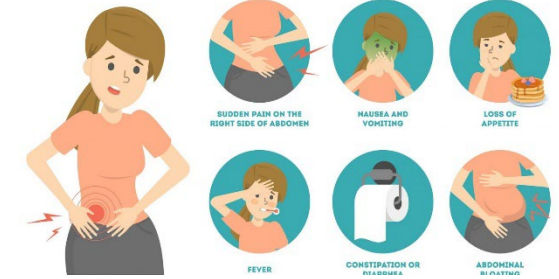
What is worth of knowing? I.



- **Acute abdomen** occurs suddenly, often from full health.
- **Colic** is the pulse of strong pain that comes in waves. It is typically accompanied by pathology of the stomach, gallbladder and kidneys.
- **Haematemesis** (vomiting of fresh blood) is most common in ruptured oesophageal varices or ulcers.
- **Melena** is a sign of bleeding from the upper part of the GIT, the blood has already been digested, so the colour of the stool is black.
- **Remember traumatic abdominal injuries**, closed trauma can be treacherous and endangers the patient with **internal bleeding**.

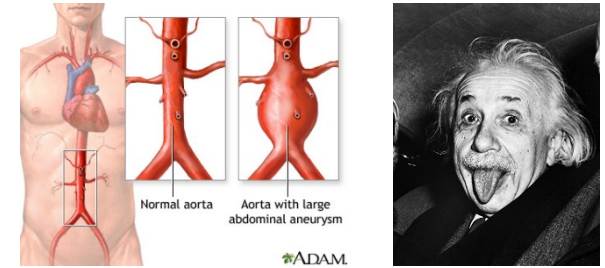
What is worth of knowing? II.

APPENDICITIS SYMPTOMS



- The most common acute abdomen is **appendicitis**, the pain is most often localized in the lower right quadrant.
- A typical sign of **peritonitis** (inflammation of the peritoneum) is abdominal pain and tenderness, the patient responds significantly to palpation and stretching of the lower limbs.
- Diarrhoea, vomiting, fever and diffuse abdominal pain are the most common signs of **gastroenteritis**.
- For every woman in fertile age think about a possible **pregnancy** (incl. extrauterine pregnancy)

What is worth of knowing? III.



- Rupture of the **abdominal aortic aneurysm (AAA)** is a rare, but very high-risk complication. It manifests itself with a sudden sharp pain, which can shoot into the back and groin. At the same time, it is often accompanied by collapse, hypotension and pulsating mass seen during palpation of the abdomen. The patient urgently needs surgery. Even with mere suspicion, call 112 immediately!
- **Myocardial infarction** can manifest itself also with pain in the upper abdomen (among other things - pain behind the sternum, shortness of breath, shooting into the left hand).

Although from the doctor's point of view the differential diagnosis of abdominal pain is relatively broad and complex, the procedure from the point of view of first aid is much simpler.

First Aid in abdominal pain

- Take medical history, perform a basic examination (SSS ABC)
- In case of **signs of shock** (weak pulse, tachycardia, not breathing normally, impaired consciousness) proceed as in shock. Call 112 immediately!
- Consider not to give pain medication due to the risk of masking symptoms.
- **Do not allow the patient to drink or eat!**
- **Leave** patient in his **comfort position**, lower limbs bent, loosen tight clothing.
- First aid for abdominal trauma - see the relevant lecture.

When to call 112?

- **Always** if the patient is **unconscious**.
- **Always** if the patient has **signs of shock** (weak pulse, tachycardia, not breathing normally, impaired consciousness).
- **Always** for **trauma** and **hematemesis**.
- **Whenever** we think of **myocardial infarction** or **AAA**.
- If a sudden acute abdomen is suspected and there are no other ways to take the patient to the surgeon examination.
- In severe gastroenteritis with signs of dehydration, unless it is otherwise possible to take the patient to a doctor.
- And **always when in doubt**.

Conclusion



Acute abdomen needs surgical examination. If the patient is unstable or there is abdominal trauma, call 112.



With traumatic abdominal injury (both open and closed) and with haematemesis there is always a risk of massive bleeding.



By sudden collapse and abdominal pain think about a ruptured AAA.

Learning outcomes

1

Student is able to list the most common causes of abdominal pain.

2

Student knows the typical symptoms of abdominal pain.

3

Student knows when abdominal pain requires acute examination by a doctor.

References

– Text:

- Málek J., Knor J. a kol. Lékařská první pomoc v urgentních stavech. 1. vyd. Praha: Grada Publishing, 2019. 224 s. ISBN 978-80-271-0590-8
- Málek J., Dvořák A., Knor J. a kol. První pomoc. [online] Copyright © 3. Lékařská fakulta, Univerzita Karlova v Praze, 2010-2012 [cit. 31.07.2020] available at: <https://www.lf3.cuni.cz/3LF-782.html>
- Furst J. First aid for abdominal pain. [online] 06.10.2015 [cit. 31.07.2020] available at: <https://www.firstaidforfree.com/first-aid-for-abdominal-pain/>

– Pictures:

- <https://www.firstaidforfree.com/how-to-assess-abdominal-pain/>
- <https://cz.pinterest.com/laurenmarie818/wilderness-first-aid/>
- <http://nigerianmedical.com/vomiting-of-blood-the-causes-and-treatment/>
- <https://elitecarehouston.com/symptoms-of-appendicitis-when-to-seek-emergency-care/>
- <https://medlineplus.gov/ency/article/000162.htm>
- <https://www.bbc.com/news/science-environment-35557727>

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