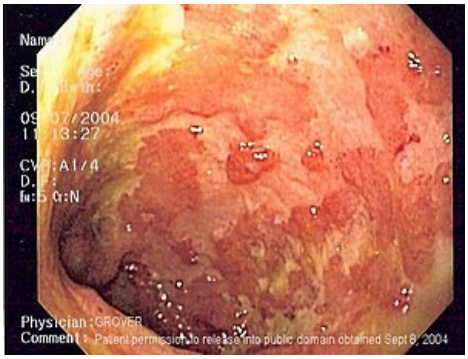
Ulcerative colitis

Ulcerative colitis (idiopathic proctocolitis, proctocolitis idiopathica, MKN-10: Te is a rare **autoimmune** type of gastrointestinal inflammation. It is a h**emorrhagic-purulent to ulcerative inflammation** of the mucosa and submucosa of the rectum and the adjacent part of the colon (proctocolitis, or the whole colon - pancolitis, **-there are never changes in the small intestine**). 20% of patients are diagnosed before the age of 20.



Ulcerative colitis

Epidemiology

- prevalence: 150 / 100,000 population
- 19% of patients are children under 18 years of age - pediatric prevalence: 29 / 100,000 population; pediatric incidence: 1-3 / 100,000 population;
- incidence has not increased in recent years (unlike Crohn's disease)
- the mean age of the patients is 11 years[1]

Etiopathogenesis

The cause is unknown. Among the most likely theories is dysregulation of the immune response to common bacterial antigens. Inflammation affects only the rectum and colonies to varying degrees. Pancolitis is common in children.Inflammation is continuous and the distal sections of the colon are usually more affected.[1]

Pathology

Only **mucosa and submucosa** are affected. Unlike Crohn's disease, the disability is continuous. Macroscopically contraction of the affected area, the mucosa is hypertrophic and edematous with numerous ulcers with swollen margins, serosa is shiny, mesocolon is not intensified. Microscopically **crypt abscesses** (dilated crypts filled with polymorphonuclear cells, their disintegration leads to the separation of the mucosa and ulceration).

Clinical picture

Gastrointestinal signs

- diarrhea with blood
- abdominal pain associated with defecation
- tenesmy (painful coercion on the stool, after defecation the feeling of coercion persists.[1]

colitis syndrome - cramping abdominal pain with watery diarrhea mixed with blood and mucus, loss of albumins

1. rectal syndrome - tenesms (compulsive feeling in the stool with defecation of a small amount of stool or mucus with blood);
2. colitis syndrome - cramping abdominal pain with watery diarrhea mixed with blood and mucus, loss of albumins

Extraintestinal manifestation.

They are significantly less common than Crohn's disease. part of them is :

- arthralgia, erythema nodosum, pyoderma gangrenosum.[1]

Complication

- iridocyclitis (affects about 1% of patients)
- glaucoma and cataracts due to corticosteroid treatment
- primary sclerosing cholangitis - may prevent the manifestations of ulcerative colitis
- "Overlap syndrome" with autoimmune hepatitis, primary sclerosing cholangitis and ulcerative colitis thromboembolic complications
- toxic megacolon (RF: anticholinergics, opiates, irigography, colonoscopy)
- colorectal cancer (after 10 years in 2%, after 50 years in 40% of patients) - prevention of 5-ASA and folic acid.[1]

Diagnostics

- **anamnesis** : chronic diarrhea, rectal bleeding, limited abdominal pain, loss of performance, weight loss;
- **physical examination**: paleness, painful resistance in the left lower abdomen;
- **laboratory diagnosis**: mild to moderate markers of inflammation, anemia;
  - antibodies against cytoplasmic components of neutrophilic leukocytes (pANCA) positive in 70%;
  - other parameters as in Crohn's disease;
- **endoscopy** – method of choice; always upper and lower (to differentiate Crohn's disease);
- **Imaging methods**:
  - ultrasound: thickened intestinal wall;
  - irigography only for strictures that cannot be overcome endoscopically;disappearance of column haustration, pseudopolyps strictures;
  - scionigraphy with radionuclide-labeled leukocytes is not used - only non-specific evidence of inflammation.[1]

Therapy

Basic goals: induction and maintenance of remission, prevention of complications

Drug therapy

- **5-aminosalicyláty** (sulfasalazin, mesalazin) – blokují metabolismus kyseliny arachidonové, tím působí mírně protizánětlivě;
- **kortikosteroidy** lokálně působící (budenosid) nebo systémově působící (Prednison);
- **imunomodulancia** (azathioprin, 6-mercaptopurin);
- **cyklosporin A** – při rezistenci na kortikosteroidy;
- **tacrolimus** (imunosupresivum ze skupiny makrolidů).
- **5-aminosalicylates** (sulfasalazine, mesalazine) - block the metabolism of arachidonic acid, thus having a mild anti-inflammatory effect;
- topically acting (budenoside) or systemically acting **corticosteroids** (Prednisone);
- **immunomodulators** (azathioprine, 6-mercaptopurine)
- **cyclosporin A** - in corticosteroid resistance; tacrolimus (an immunosuppressant from the macrolide group)

Targeted treatment

- **Infliximab** (Remicade) - chimeric monoclonal antibody (human + mouse) against TNF-α Probiotics
- E. coli Nissle - Adults with mild form of the disease have a comparable effect to mesalazine;

Nutritional therapy

- Nutritional therapy enteral nutrition does not have as significant an effect as in Crohn's disease;

Surgical tehrapy

- **Urgent** indications are for perforation, bleeding, endotoxemic shock and toxic megacolon - subtotal colectomy with ileostomy and blind closure of the rectum according to Hartmann is performed or it is performed as a mucosal fistula in the lower pole of the surgical wound according to Mikulicz.
- **Elective** (planned) surgery in case of failure of conservative treatment, mucosal dysplasia or carcinoma, stricture or extracolic manifestations, total proctocolectomy with ileostomy or ileo-anal anastomosis using pouch (J, S or W) is recommended. The pouch forms a stool reservoir, so a permanent ileostomy is not necessary.[1]

Supportive therapy

- psychological care.[1]

Crohn's disease vs ulcerative colitis

In differential diagnosis, the following differences in examination results and manifestations can be followed:

	Crohn's disease	ulcerative colitis
Location	the entire digestive tract, most often the terminal ileum	rectum and colon
Abdominal Xray	segmental involvement (alternation of inflammatory and unaffected sections)	continuous route from the oral cavity
	intestinal wall thickening, stenosis	disappeared haustration
Endoscopy	discontinuous involvement, focal aphthae, linear ulcers	hemorrhagic mucosa, diffuse inflammation, pseudopolyps
Histology	inflammation of all layers of the intestinal wall (transmural)	Inflammation of the mucosa and submucosa
	typical epithelioid granulomas, lymphocytic infiltrates	cryptitis, crypt abscesses
Clinical picture	abdominal pain, weight loss, diarrhea with blood and mucus	bloody diarrhea with tenesms
Complication	fistula formation, abscess stenosis	increased risk of cancer[2]

Links

External links

- Ulcerózní kolitida (https://www.youtube.com/watch?v=dYQrqeTxC9g) – video on youtube.com

Reference

1. LEBL, J, J JANDA a P POHUNEK, et al. *Klinická pediatrie.* 1. vydání. Galén, 2012. 698 s. s. 316-318. ISBN 978-80-7262-772-1
2. MUNTAU, Ania Carolina. *Pediatrie.* 4. vydání. Praha : Grada, 2009. s. 372-377. ISBN 978-80-247-2525-3

Sources

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  - PASTOR, Jan. *Langenbeck's medical web page* [online]. [cit. 2010]. <https://langenbeck.webs.com/>.
  - BENEŠ, Jiří. *Studijní materiály* [online]. ©2007. [cit. 2010]. <http://www.jirben.wz.cz/>.
  - ŠTEFÁNEK, Jiří. *Medicína, nemoci, studium na 1. LF UK* [online]. [cit. 2009]. <https://www.stefajir.cz/>.

Used literature

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  - HRODEK, Otto a Jan VAVŘINEC, et al. *Pediatrie.* 1. vydání. Praha : Galén, 2002. ISBN 80-7262-178-5.
  - ŠAŠINKA, Miroslav, Tibor ŠAGÁT a László KOVÁCS, et al. *Pediatria.* 2. vydání. Bratislava : Herba, 2007. ISBN 978-80-

89171-49-1.