



Unit V – Problem 6 – Pharmacology: Antiprotozoal Drugs & Drugs for GI Diseases

- **Therapeutic approach for ulcerative colitis is determined by:**

- **Severity of symptoms** (clinical severity as mild, moderate & severe according to Truelove & Witt's severity index):

	Mild	Moderate	Severe
Bowel movements (no. per day)	Fewer than 4	4-6	6 or more plus at least one of the features of systemic upset (marked with * below)
Blood in stools	No more than small amounts of blood	Between mild and severe	Visible blood
Pyrexia (temperature greater than 37.8°C) *	No	No	Yes
Pulse rate greater than 90 bpm *	No	No	Yes
Anaemia *	No	No	Yes
Erythrocyte sedimentation rate (mm/hour) *	30 or below	30 or below	Above 30

- **Degree of colonic involvement:**

Proctitis	Inflammation of the rectum	5-ASA suppository (mesalamine)
Proctosigmoiditis	Inf. Of rectum & sigmoid	5-ASA enema/foam (mesalamine)
Distal ulcerative colitis	Reaching the splenic flexure	5-ASA enema (mesalamine) ± oral 5-ASA
Extensive colitis or pancolitis	Involvement of the whole colon	Oral 5-ASA

Note: oral formulations include:

- ✓ Those which are pH-dependent (mesalamine): they will be released in the terminal ileum and colon at $\text{pH} \geq 7$.
- ✓ Those which are pH-independent (mesalamine): they will be released in the duodenum, jejunum, ileum & colon.
- ✓ Azo-compounds (ending with: -azide): the azo bond will only be cleaved in the colon.

- **Mechanism of action of 5-ASA:**

- Inhibition of NF-kappaB; inhibition of pro-inflammatory mediators (IL-1, IL-6, TNF- α); inhibition of lipoxygenase pathway and inhibition of COX-2.
- **Note:** acute severe colitis is treated with IV corticosteroids.



- Treatment of amebiasis:

Clinical setting	Drug(s) of choice
Asymptomatic intestinal infection	Luminal amebicide (iodoquilon): these are effective against trophozoites in the lumen of the gut only.
Mild-moderate intestinal infection	Luminal amebicide + tissue amebicide (metronidazole which inhibits bacterial DNA synthesis). Tissue amebicides are effective against trophozoites invading the wall of the gut.
Severe intestinal infection	As mentioned above for mild-moderate intestinal infection
Hepatic abscess	Luminal amebicide + tissue amebicide + chloroquine

Life cycle of *Entameba histolytica*

