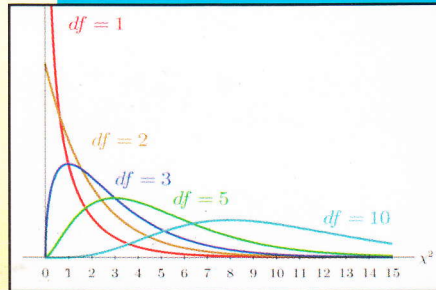
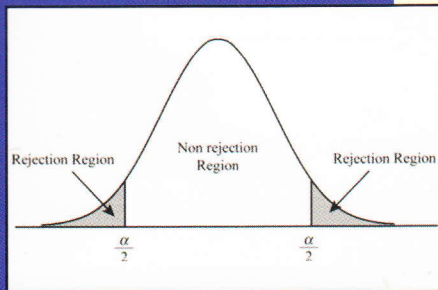
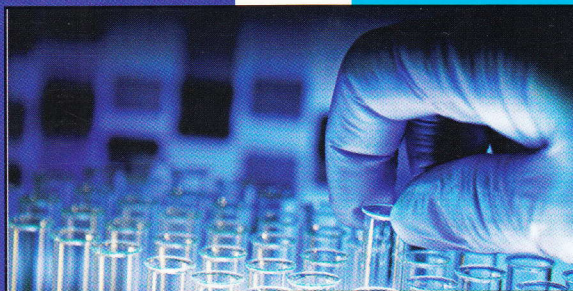


AS PER PCI REGULATIONS
THIRD YEAR B. PHARM.
SEMESTER-VI

EXPERIMENTAL PHARMACOLOGY-III

Dr. GHANSHYAM PANIGRAHI

Dr. ARJUN PATRA



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Experiment No. 3

STUDY OF ANTI-ULCER ACTIVITY OF A DRUG USING PYLORUS LIGAND (SHAY) RAT MODEL AND NSAIDS INDUCED ULCER MODEL

(Chapter contributed by Dr. Ghanshyam Panigrahi and Dr. Arjun Patra)

Purpose:

At the end of practical class, the students shall be able to:

1. Know about peptic ulcer.
2. Know the effects of different antiulcer drugs and their mechanisms.
3. Know about different antiulcer screening methods.

Terminology:

Peptic ulcer: Peptic ulcer occurs when stomach acid damages the lining of the digestive tract. It happens due to imbalance between aggressive factors (acid, pepsin, bile and *Helicobacter pylori*) and mucosal protective mechanisms (gastric mucus and bicarbonate secretion, prostaglandin, nitric oxide, innate resistance of the mucosal cells). Peptic ulcer may be a gastric ulcer or duodenal ulcer.

Description:

Peptic ulcer is one of the most prevalent chronic gastrointestinal disorders. It happens probably due to an imbalance between the aggressive factors (acid, pepsin and bile) and the defensive factors (gastric mucus and bicarbonate secretion, prostaglandin, nitric oxide, and innate resistance of the mucosal cells). Peptic ulcer occurs in that part of the gastrointestinal tract (G.I.T.) which is exposed to gastric acid and pepsin, i.e. the stomach and duodenum. A variety of psychosomatic, humoral and vascular derangements have been implicated as a contributor to ulcer formation. Now, it has been believed that *Helicobacter pylori* infection is the most important pathogenic factor to peptic ulcer formation and recurrence. Faulty dietary habits, smoking, alcohol, drugs, hereditary, *Helicobacter pylori* are the factors responsible for producing ulcer. An understanding of the mechanism and control of gastric acid secretion (Fig. 3.1) with different category of drugs (Table 3.1) will elucidate the targets of anti-secretory drug action.