

## A REVIEW ON ANTIULCER ACTIVITY OF *CTENOLEPIS GARCINI* (Burm.f)

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### ABSTRACT

*Ctenolepis garcini* (Burm.f) belongs to the family cucurbitaceae, in Tamil name called as kollankovai is a climber. The plant widely distributed in southern India and Ceylon. In ayurvedic preparation it is used in decoction of roots is given in colic, fever, indigestion, anorexia, rheumatism. Leaves paste is boiled and applied to the any swelling it reduced the swelling. Fruit pulp is applied to the foot sole to cure heat in the body. Main chemical constituents in this plant alkaloids, flavonoids, cardiac glycosides, phenols, tannins, saponins, reducing sugars. Peptic ulcer is erosion in a section of the gastro intestinal mucosa. It may typically in the stomach and duodenal ulcer. Ulcer is not only caused by spicy food. It is commonly caused by helicobacter pylori and also occurred in some medicinal drugs such as aspirin and other non-steroidal anti-inflammatory drugs. Many synthetic drugs used in administration of peptic ulcers. But some adverse effects will be occurred. In this review literature identified as some medicinal plants and over all active constituents was reported.

**Keywords:** *Ctenolepis Garcini*

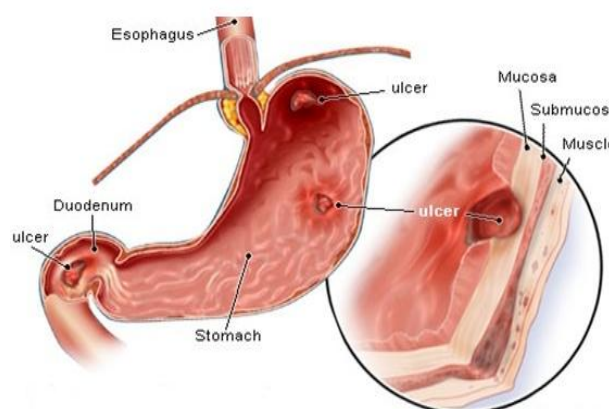
### INTRODUCTION

Peptic ulcer disease is a severe medicinal problem. In the order of 50,000 new cases are reported every year. Ulcer disease has develop into an infection is affecting the older people. In men duodenal sore were more universal than gastric ulcers. In women converse was found to be accurate. 35% patients diagnosed with gastric ulcers will suffer serious complications. The death rates from peptic ulcer disease are low.

Ulcers can develop in the throat, appetite (or) duodenum. Peptic ulcer disease is one of the several disorders of the upper gastrointestinal region that is caused by gastric acid. Patients with peptic ulcer disease may present symptoms from mild abdominal pain, perforation, and hemorrhage.

Gastric as well as duodenal ulcers are breaks in the gastric and duodenal mucosa. Both gastric and duodenal ulcers relate to the corrosive action of pepsin and hydrochloric acid on the

mucosa of greater gastrointestinal region. The ulcers range is 3mm and a number of centimeters in diameter.



**Figure 1:**

### Symptoms

Peptic ulcer disease present with abdominal discomfort, pain (or) nausea. The pain is to be found in the epigastria. Patients may describe the pain of peptic ulcer as burning and as hunger. Pains slowly building up for 1-2 hours, then gradually decreasing. The antacids may give temporary relief. Gastric ulcer pain is

aggravated by meals, where as the pain of duodenal ulcers is relived by meals, duodenal ulcers do not lose weight.

### Defensive and offensive factors

Gastric acid emission is simply single reason in the pathogenesis of peptic painful syndrome. Decreased mucosal defense against gastric acid. The upper gastrointestinal tract is dependent upon the balance between defensive and offensive factors such as gastric acid, H pylori, NSAIDs and pepsin. Defensive factors such as prostaglandins, mucous, bicarbonate and blood flow to mucosa affecting gastrointestinal mucosa.

### Peptic ulcers

Peptic ulcers generally two types

#### 1. Acute peptic ulcer

a. Cushing ulcer: These ulcers arising in patients with intracranial injury.

b. Curling ulcer: Mainly occur in duodenum and associated with severe burns and trauma.

#### 2. Chronic peptic ulcer

a. Duodenal ulcer: These ulcer sore in the upper part of small intestine

Causes: Helicobacter pylori

Damaging of mucosal cell wall

b. Gastric ulcer: It is sore that is on the inside of the stomach

Causes: Helicobacter pylori

Nsaids (aspirin, ibuprofen, diclofenac)

c. Esophageal ulcer: It occurs in the lower end of esophagus.

Causes: Chronic gastro esophageal reflux disease.

d. Bleeding ulcer: Most dangerous and internal bleeding type of ulcer.

e. Refractory ulcer: It is not healed after at least 3 months of treatment.

### Helicobacter pylori infection:

H. pylori colonize the human stomach. It seems spread to person to person via fecal oral route.

Water is a reservoir for transmission of H. pylori.

H. pylori mostly effect in all patients those are people affecting in gastric or duodenal ulcer. It induces antral gastritis. Bacteria create in the antrum of 95 percent of patients suffering duodenal ulcers and 75 patients are suffering from gastric ulcers. Rod shaped bacteria found in the mucus layer and intercellular junction of the gastric epithelium. H. pylori is most dangerous urease producer and releasing ammonia, increased  $p^H$ . Ammonia shows a cytotoxic effect. Electron microscopic studies showed the damage to the gastric epithelial microvilli in the immediate vicinity of H. pylori.



Figure 2:

### Nonsteroidal anti inflammatory drugs

Nsaids development for associated gastric and duodenal ulcers includes advanced age, history of previous ulcer disease, corticosteroids and anticoagulants and higher doses of Nsaids. Nsaids to play decreased synthesis of mucosal prostaglandins, arachidonic acid is catalyzed by two cyclo oxygenase enzymes.

These are

Cyclooxygenase-1: Housekeeping enzyme maintains homeostasis of organs.

Cyclooxygenase-2: Inflammatory enzyme.

### Gastrinoma

Massive gastric acid hyper secretion and a gastrin producing islet cell tumor of the pancreas. Gastrinoma approximately 50 percent of patients another 20 percent of patients have duodenum and other in the stomach.

The herbal plant of *ctenolepis garcini* contains many useful drugs preparing in recent years.

Herbal plants mainly contain chemical constituents that are used to decreasing the disease. The plants are easily available, less expensive, safe and some side effects.

*Ctenolepis garcini* (Burm.f) C.B. Clarke belonging to the family cucurbitaceae. *Ctenolepis garcini* is also known as a Garcin's bur cucumber. It is a climber and distributed in India

**Taxonomy of *ctenolepis garcini*:**

- Kingdom : plantae
- Clade : angiosperm
- Order : cucurbitales
- Family : cucurbitaceae
- Genus : ctenolepis
- Species : c. garcini
- Synonyms: *Sicyos garcini*, *Blastania garcini*



**Figure 3:**

*Ctenolepis garcini* is a climber. It has three to five lobed palmate leaves. It contains fruits and leaves. It is a monoecious plant. Leaves deeply 3-5 lobed to 5x6 cm in ovate shaped. It has two types of flowers. They are female and male flowers. Female flowers are borne singly and solitary. Male flowers are small in size and borne in cymes. Fruits are borne in

December to January. Fruits contain one to two seeds. It is kidney shape or hammer shape. The roots are used in colic, fever, indigestion, anorexia and rheumatism and leaves are used in gonorrhoea and antioxidant property. The fruit pulp is useful in foot sole to treat the temperature in body. The plant already proved these activities are hepatoprotective activity, anticancer activity, antibacterial activity, antifungal activity and anti-inflammatory activity. Main antioxidant activity of *ctenolepis garcini* studied by superoxide radical scavenging assay, non enzymatic Hb glycosylation assay, and total antioxidant capacity are proved in this plant. So *ctenolepis garcini* is used in several diseases. Plant phytochemical constituents are alkaloids, flavonoids, cardiac glycosides, saponins, reducing sugars, phenols and more in secondary metabolites. Mainly the fruit contains chemical constituent is hydroxyl citric acid is preventing fat storage, control appetite, increased exercise in human health. Main used to *ctenolepis garcini* in joint pains, treating worms and parasite and emptying the bowel syndrome.

**CONCLUSION:**

*Ctenolepis garcini* have been associated with valuable natural active constituents like alkaloids, flavonoids, cardiac glycosides, phenols, tannins, saponins, reducing sugars. This herbal medicine that may show a reliable effect to treat many disorders.

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