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PHARMACOLOGICAL EVALUTION OF ANTI-ULCER ACTIVITIS OF *BAUHINIA FORFICATA* LEAVES EXRACTS

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ABSTRACT

Gastric ulcer is taking place in day today life due to excess use Steroids, NSAIDs, in stress, alcohol intake. For the treatment of gastric ulcer disease and peptic ulcer disease may chemical drugs are available in market such as Proton pump inhibitors, H_2 Antihistaminic Drugs Anticholinergics The most serious side effect of proton pump inhibitors are Bacterial infections, Anaemia, Bone fractures, Damage to arteries, Dementia, Heart attack or heart failure, kidney disease or injuries, Premature death, Stroke. The serious side effects H_2 blocker are Mental Confusion, Headache, leucopoenia, thrombocytopaenia, acute pancreatitis, heart palpitations, galactorrhoea, gynecomastia, difficulty in breathing. From last 2-decade people of world are move towards the herbal medicine because it will produce is very less toxic effect when we compare to chemical drugs. The Phytochemical Tests shown Alkaloids, Carbohydrate, Glycosides, Phytosterols/Terpens Oils Protein, Tannins and Saponins. The TLC studies displayed the presence of compound such as, Flavonoid, Terpenoids and alkaloid with the significant Rf values. The pre-clinical pharmacological anti-ulcer impacts had seen by applying numerous extracts of *Bauhinia forficata* such as aqueous, chloroform and methanol on different gastric-ulcer models, are pylorus ligation, Stress induced, Aspirin induced, and Ethanol induce ulcers models. These test sample had administered thru oral route at a dose of 400mg/kg. Entirely extracts improved the ulcer healing of all gastric ulcers models ($P< 0.05$). But methanol extract had more significant when we equate with standard drug ranitidine ($P< 0.001$). In the pylorus ligation, stress induce ulcer, ethanol induces ulcer and aspirin induce ulcer showed remarkable anti-ulcer activities ($P< 0.05$). From this experiment and biochemical test result methanolic leaves extract of *Bauhinia forficata* had shown more significant ulcer healing activity.

KEYWORDS: *Bauhinia forficata,* Ulcer index, anti-ulcer models, TLC and histopathology.

INTRODUCTION

Gastric ulcer is breakdown of the gastric mucosa as well as duodenum mucosa that occurs whenever the normal mucosal defensives factors becomes weakened and overcome through antagonistic luminal factors are gastric acid & pepsin. The characterization, ulcers spread over the muscularis mucosa are generally 2.5 mm in radius.

The pathogenesis of peptic ulcer is depending upon several factors when these factors imbalanced then it will lead to peptic ulcer disease.1.aggressive factors are-If the person is suffering from helicobacter pillory, taking medicine such as NSAIDs e.g. Asprin, taking corticosteroids for long period of time, taking alcohol regularly, taking Tabaco smoke, mucosal defensive factors are- If less surface mucus production, less bicarbonate production on the mucus membrane of stomach, less mucosal blood flow, less working apical epithelial cell transport system less epithelial reformative capacity, less production of prostaglandins In the United States, every year 5 lakhs new cases of peptic ulcer and 40 lakhs ulcer reappearances; occurrence of peptic ulcers in an individual in his/her lifetime is approximately 10%. Ulcers occurrence 5x time more in the patient's duodenum. In the antrum region more than 60% benign ulcer is more common whereas in the antrum region of lesser curvature ulcer are less than 24%.[1]

Ulcers is more common in male when relate with female. Even though ulcers can happen in any stage of life, duodenal ulcers more in patients 30 -55 years, whereas gastric ulcers is more in patients having age in between 55 to 70 years. in smokers and the individual are taking medicine such as NSAIDs are prone to ulcer.[1]

According to research most recent by WHO Exactly data information had been released in May 2014 Peptic Ulcer Disease mortality rate in India achieved 85,487 or 0.96 percent of mortalities rate. In this the United State of America got rank 161 and Death rate was 0.6 percent in 100,000 peoples. Peptic ulcer is the huge problems in world and everyday lots of peoples are dying due to peptic ulcer.[2] There are several nations come under red zone in this India got 26 ranks. In India Gastric ulcer disorder is common problem. The India frequency of gastric ulcer disease is approximately 4 in 869 which is about 12, 25,614 public disease from Gastric ulcerdisease from the entire 116 crores population. In 2017 India population is more than 125 crores and frequency of gastric ulcer may be increase. The Rate of Gastric

ulcer is diminishing in developed nations but growing in emerging nations.

For the treatment of gastric ulcer disease and peptic ulcer disease may chemical drugs are available in market such as Proton pump inhibitors like Omeprazole, Rabeprazole, Pantoprazole, Lansoprazole, Esomeprazole H_2 Antihistaminic drugs are Ranitidine, Famotidine, Nizatidine, Cimetidine, Roxatidine. Anticholinergics Pirenzepine, Telenzepine, Propantheline, and Oxyphenonium Misoprostol, Emprostil. The most serious side effect of PPIs are Bacterial infections, Bone fractures, Damage to arteries, Dementia, Heart attack or heart failure, Kidney disease or injuries, Premature death, Stroke. The serious side effects H_2 blocker are heart palpitations, galactorrhoea, gynecomastia, difficulty in breathing From last 10-15 years people of world are move towards the herbal medicine because it will produce is very less toxic effect when we compare to chemical drugs. When any chemical drugs are taken by the patient for the treatment or management of any disease, it be cure the disease but along with this it will produce acute and chronic toxic effect and developed of numerus new disease. So, it is necessary to perform the researches for investigation or development of new Phyto-biochemical compound form plants. Minerals.

***Bauhinia Forficata*[3]**

Bauhinia forficata is belong to family *fabaceae* the dominion is kingdom Plantae, category is class dicotyledonae, order is fabales and taxonomic group is bauhinia. Bouhinia in English, devkanchanmu in Telgu and shwet kachanarin Hindi, kaanchnar in Sanskrit. The species is found India, at the side of North East India. *Bauhinia Forficata* L. tree likewise found in yazali location is 27.5358° N, and 93.7524° E lower subansiri region of Arunachal Pradesh.

These are some countries where *Bauhinia forficata. l* is present in abundant quantity Brazil, Cuba, Fiji, Peru. From the literature survey it is clear that the leaves of plant *Bauhinia forficate* is used as hypoglycemic activity.[4] anti-ulcer activity not reported pharmacologically. It is practice traditionally for gastric ach but there is no pharmacological-clinical data is available. Hence, the purpose of this study to evaluation of anti-ulcer activity of *Bauhinia forficata .l* and make obtainable preclinical data of it.

MATERIAL AND METHODS

1. Pharmacognostic Study

The leaves of *Bauhinia Forficata* collection number **[30482 (ARUN)]** for the present studies were collected from forest of Yazali, Lower subansiri, Arunachal Pradesh, India. The plant

was identified, and authenticated by Dr. Umeshkumar L. Tiwari Scientist of Botanical Survey of India, Arunachal Pradesh Reginal center, Itanager-791111 (INDIA).

After the authentication plant was dried at room temperature until they become free from moisture.

Pharmacogenetic Study of *Bauhinia Forficata* LeavesExtraction

Aqueous, Chloroform, and Methanol extracted of *Bauhinia Forficata.*

Percentage Yield of Extracts

Table no. 1: Extracts Yielded and Percentage yielded of *Bauhinia Forficata* Leaves.

Sl. No.	Extracts	Colour of extracts	Yields in gm	Percentage Yields
1.	Chloroform	Dark brown paste	13	2.6 %
2.	Methanol	Dark Greenish clump	16	3.2 %
3.	Aqueous	Brown powder	34	6.8 %

PRELIMINARY PLANTS BIOLOGICALLY ACTIVE COMPOUNDS TESTING OF *Bauhinia forficata* LEAVES EXTRACTS

Table no. 2:- Phytochemical Compounds Testing Of *Bauhinia forficata* Leaves Extracts.

Sl. No.	Test	Chloroform Extract	Methanolic Extract	Aqueous Extract
I	Alkaloids	+	+	+
II	Carbohydrates	-	+	+
III	Flavonoids	-	+	+
IV	Glycosides	+	+	+
V	Terpens	+	+	+
VI	Proteins	-	+	+
VII	Tannins	-	+	+
VIII	Saponins	-	+	+

-	Absent	+	Presence

Thin Layer Chromotograpy of *Bauhinia Forficata*

Table no. 3: Rf values of methanolic extract of *Bauhinia Forficata* Leaves.

Compound	Mobile phase	Ratio	Rf value
Flavonoid	Chloroform: Methanol	18.2	0.89
alkaloid	Methanol: sodium hydroxide	17:3	0.8,0.76
Terpenoids	Benzene: Ethyl acetate	1:1	0.3, 0.63

Experimental Animals

Albino Wistar rats weight 160-220g had taken from Biogen laboratory animal facility CPCSEA Registration No. (971/bc/06), Bangaluru. These rats were breeding and preserved in

animal household of "East Point College of Pharmacy" for experimental work. Rats had been well-maintained under calculated condition of heat at $27^{o} \pm 2^{o}$ C that is and 24 hours light-dark rounds for starters week. these rats had kept in polypropylene cages and paddy that is containing as sheet. That they had an access that is free standard pellets and wateradvertising libitum,s.

Acute Toxicity Studies (Ld_{50})

In equally stage I and Stage II procedures, no one of the mices didn't express any toxicity as will death when given the dosage administration of *Bauhinia Forficata* extract AEBF,CEBF, and MEBF 5mg/kg, 50mg/kg, 300mg/kg, 2000mg/kg and 4000mg/kg according to acute toxicity guideline 423 given by Organization of Economic Cooperation and Development. Thus, $1/10^{th}$ of supreme dose (400 mg/kg) tested had selected this presentstudy.

Pylorus Ligation Ulcer Model

Albino Wistar rats of either gender weighing between (120- 180gms) are divided in to groups of an animal. In this process albino rats are fasted in specific cages every day and night for 24 hours. *Bauhinia Forficata* extracts, standard drugs or control vehicle is administered 30 minutes just before ligation that is pyloric. The abdomen is opened and the pylorus was ligated under light ether anaesthesia. The stomach will be sutured. The animals are assassinating with excess of anaesthetic ether, and the stomach is dissected out gastric juice is collected had drained into tubes and had centrifuged at 1000 rpm for 10 minutes and the volume is noted at the end of 4 hours afterward ligation. The pH of gastric juice is recorded by pH meter. Then articles are afflicted by analysis at no cost and acidity that is total. The stomachs are then washed with operating water to see for ulcers into the portion that is glandular of stomach. The number of ulcers per stomach are noted and extent for the ulcers scored microscopically by using 10x lens.

Histopathological studies had been carried out by repairing belly cells in 10% formalin for 24 hours. The formalin fixed specimens are embedded in section and paraffin(3-5μm) and stained with haematoxylin and eosin dye. The sections that are histochemical examined by light microscopy.[5,6]

Ulcer Index

0 means – without gastric ulcer

1 means- light surface gastric ulcer

2 means- serious gastric ulcer

3 means-puncture gastric ulcer

4 means- wide puncture gastric ulceri.e,

Nil abscess-**0**

Abscess is less then 1mm diameter-**1**

Abscess is in between 1-2 mm diameter -**2**

Abscess is in between 2-4 mm diameter-**3**

Abscess is greater then 4 mm diameter-**4**

Calculation of ulcer Index

$$UI = UN + US + UP \times 10\text{-}1$$

Where as

UI = Ulcer Index

UN = Average of number of ulcer per animal

US = Average of severity score

UP = Percentage of animal with ulcer

Percentage of Ulcers Protection

Percentage Inhibition of Ulcer = (Ulcer index of Control-Ulcer Index of Test) × 100 ÷ Ulcer index of Control.

Aspirin Induced Ulcer Model

Albino rats of either gender with a weight in between 120-180 gms are divided into five groups. in every category of six rats in a group. The rats are fasted every day and night for 24 hours. The test *Bauhinia Forficata* extracts at a dose of 400mg/kg in design associated with test is administered orally 30 minutes moment just before aspirin at dosage of 200 mg/kg. 4 hours later on the rats are assassinating by utilizing ether that is an aesthetic their stomachs dissected as well as addition they had been exposed along greater curvature for the dedication of gastric lesions. Ulcer index determined by noting the true wide range of ulcers per animal and extent scored by watching the ulcers microscopically with the aid of 10x lens and scoring is performed below.[7]

Swimming Stress Induced Model

Stress instigated ulcers were acquired by constrain swimming the glass chamber (tallness 45cm breadth 35cm) containing water up to 35cm kept up at 23^0C for 3 hrs. Rats were not eat

for 24 hrs preceding the test. After the medicine treatment (standard/test) creatures were middle of the road to swim for 3hrs then rats were investigated stomachs were expelled. Every stomach had opened over the greater curvature ulcer index record.

Ethanol Induced Ulcer Model

Albino rats of either gender with a weight in between (120-180 grams) are isolated into group. The rats kept fasted for 24 hours through free get to water. rats are given test *Bauhinia Forficata* extracts or standard medication. after 1-hour 1ml/ 200grams of 99.80% liquor is offered orally to every individual. The rats anesthetized had been assassinating 60 minutes final with ether and stomach had been cut across the greater curvature and movement and ulceration had been scored. The total amount of ulcers together with amount of every ulcer had been fixed. Ulcer list had been ascertained seriousness that is utilizing and normal quantity of ulcers per creature. Severity ratings as under.[8]

Statistical Analysis

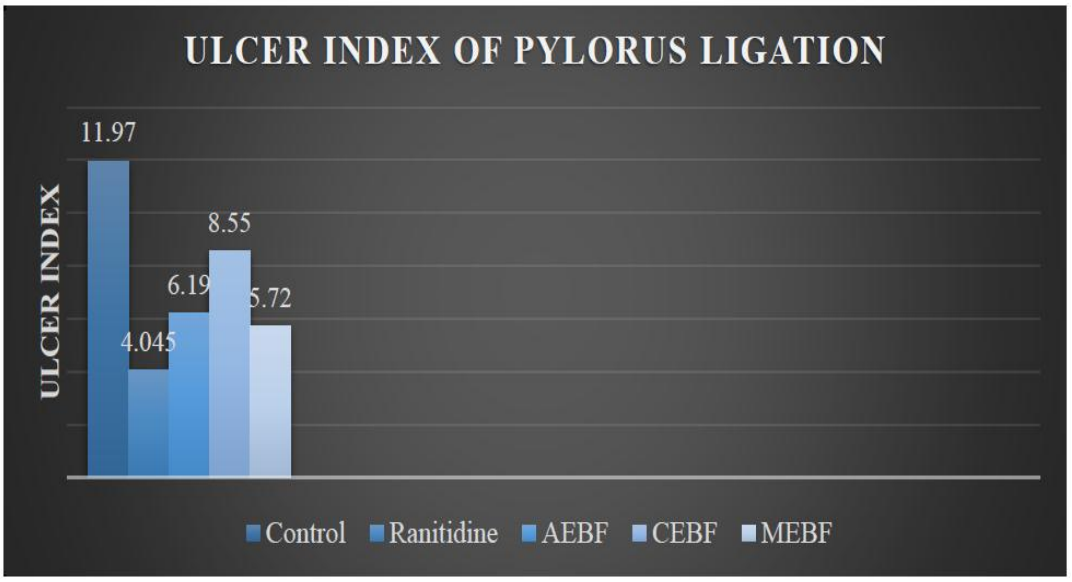
ANOVA followed by non-parametric Dunnett's test was used by IBM SPSS STATISTCS VERSION 20. values are expressed as mean + S.E.M, n=6 and *p<0.05, **P<0.01, ***P<0.001 was considered significant and graph was plotted by Excel (Microsoft office 2010).

RESULT

Gastric Pylorus Ligation In Rats

Table no. 4: Impact of AEBF, MEBF and CEBF on Ulcer Index in Pylorus Ligation.

Group	Treatment	Ulcer index	% ulcer protection
Control	Pylorus ligation for 5 hours	11.97±0.21***	0.0
Ranitidine	100mg/kg b. wt, suspended in vehicle+ pylorus ligation.	4.045±0.11**	*66.207*
AEBF	400mg/kg b. wt, suspended in vehicle+ pylorus ligation.	6.19±0.16***	*48.28*
CEBF	400mg/kg b. wt, suspended in vehicle+ pylorus ligation.	8.55±0.20***	*28.57*
MEBF	400mg/kg b. wt, suspended in vehicle+ pylorus ligation.	5.72±0.59***	*52.21*



values are expressed as mean + S.E.M, n=6 and *p<0.05, **P<0.01, ***P<0.001 was considered

Fig. No.1: Impact of various extract of *Bauhinia Forficata* in Ulcer index at Pylorus Ligation caused Ulcer in Rat model.

Table No.5: Impact of AEBF, MEBF and CEBF in pH, Gastric Volume, Free Acidity and Total Acidity in Pylorus Ligation Ulcer Screening Model.

SI. No	Treatment	Dose	pH	Gastric volume	Free acidity	Total acidity	Total Protein
1	**Control**	-	1.85± 0.160	7.65 ± 019*	89.17± 1.85	114.50± 3.22***	6.55± 0.01
2	**Ranitidine**	100mg/kg	6.63± 0.22***	2.93± 0.16***	40.13± 1.94***	48.48± 1.665***	11.54± 0.01**
3	**AEBF**	400mg/kg	4.9± 0.23***	4.03± 0.131***	55.46 ± 1.78***	77.45± 1.76***	9.37± 0.054**
4	**CEBF**	400mg/kg	3.63± 0.21***	5.90± 0.18***	66.79± 1.718***	81.45± 1.196***	7.62± 0.03***
5	**MEBF**	400mg/kg	5.517± 0.115***	3.78± 0.124***	52.7± 2.141***	62.97± 1.245***	10.53± 0.04***

values are expressed as mean + S.E.M, n=6 and *p<0.05, **P<0.01, ***P<0.001 was considered.

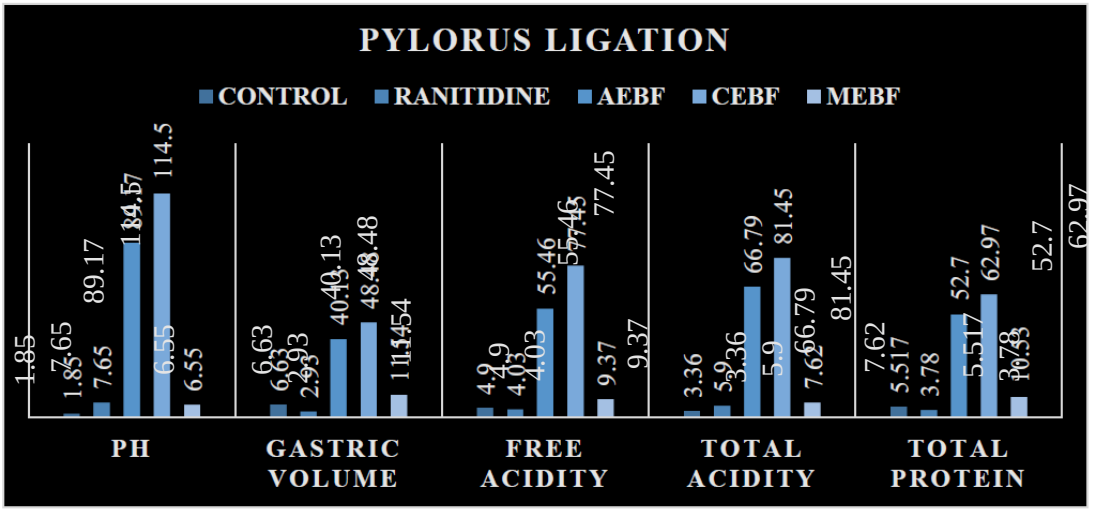


Fig No.2: Impact of various extract of *Bauhinia Forficata* in pH, Gastric Volume, Free Acidity, Total Acidity and total protein at Pylorus Ligation caused Ulcer in Rat models.

Pylorus ligation model All the *Bauhinia Forficata* extracts has shown a significant anti-ulcer activity there is reduction in ulcer index when equated to control. The percentage of ulcer protection is increase when compare to standard drug ranitidine. The more activity shown by the MEBF at a dose 400mg/kg body weight significant reduction of ulcer index, Gastric volume, Free acidity, Total acidity and rise in P^H and Total Protein. (Table 4, Fig 1 and Table 5, Fig 2).

Pictures demonstrating impact of various extract of *Bauhinia Forficata*. On ulcer recuperating in Pylorus Ligated Rat's gastric ulcers.

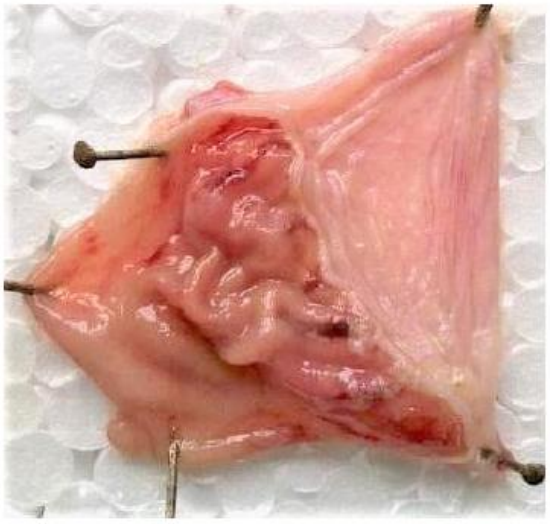


Figure.3
Group I Control

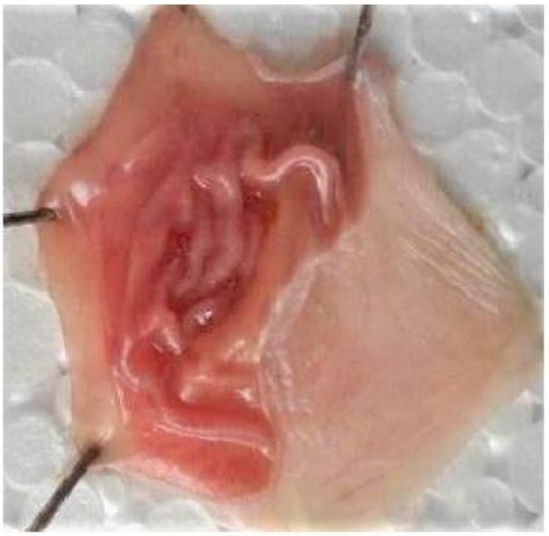


Figure.4
Group II Ranitidine 100 mg/kg

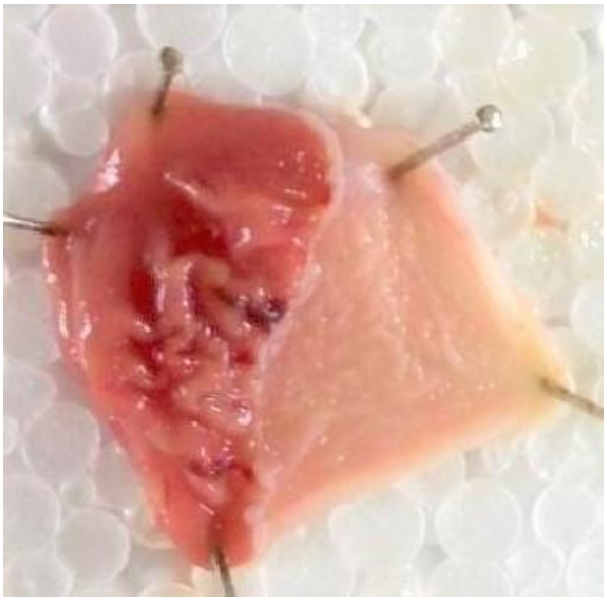


Figure.5
Group III-AEBF 400mg/kg

Figure.6
Group IV CEBF 400mg/kg

Figure. 7: Group V-MEBF 400mg/kg.

GROUP-I The ulcer produce in anterior serosal surface of stomach, mucosa get harm and lot of blood clotes are seen. More ulcer range found. **(**Figure.3).

GROUP-II The ulcer create in anterior serosal surface of the stomach, less mucosa get harm here and encompassing areas. The group contain the Ranitidine. Less ulcer are found. **(**Figure.4).

GROUP-III The ulcer happen in anterior serosal surface of the stomach. mucosa get harm around there and encompassing areas. The group contain the Aqueous extracts of *Bauhinia*

Forficata. The stomach contain less ulcer as compaire to control **(**Figure.5).

GROUP-IV The ulcer occurs in anterior serosal surface of the stomach. The group contain the Chloroform extracts of *Bauhinia Forficata.* The stomach get patch the harming segment of ulcer. **(**Figure.6).

GROUP-V The ulcer occurs in anterior serosal surface of the stomach. the Methanolic extracts of *Bauhinia Forficata.* The stomach gets repair the harming segment of ulcer. Easley envisioned more practicable extract. **(**Figure.7).

Histopathological Studies of various Extracts of *Bauhinia Forficata* on the Pylorus Ligated Ulcer Models.

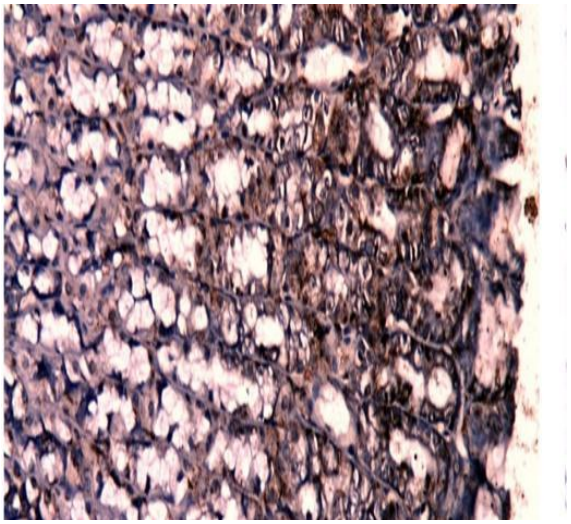


Figure.8
Group-I: Control (Non-treated group)

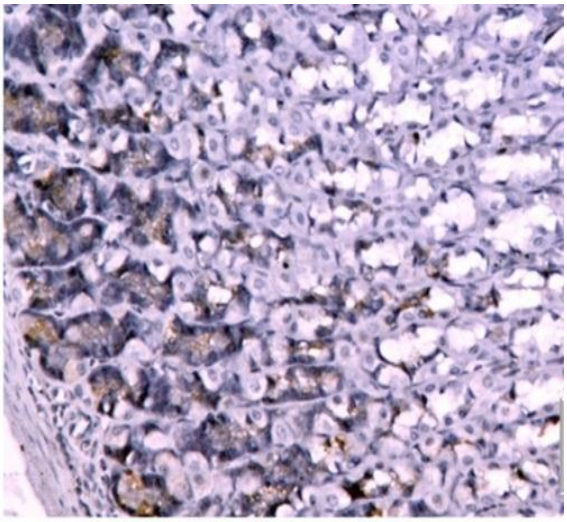


Figure.9
Group II: Ranitidine [100mg/kg].

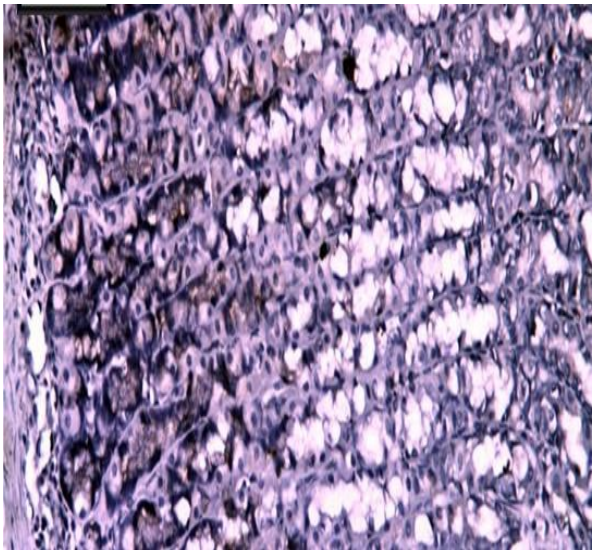


Figure.10
Group III: (AEBF) [400mg/kg].

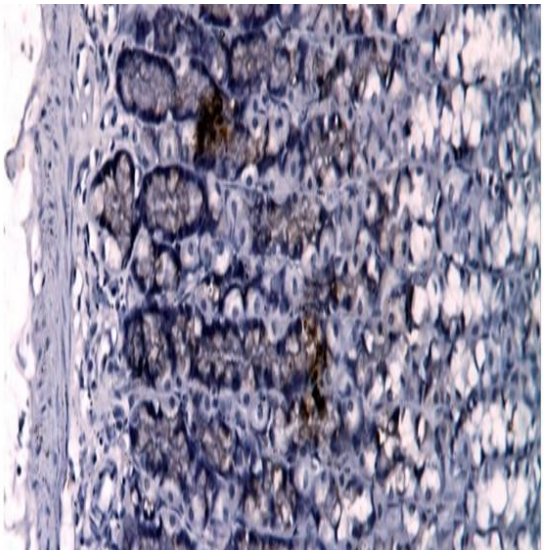


Figure.11
Group – VI: (CEBF) [400mg/kg].

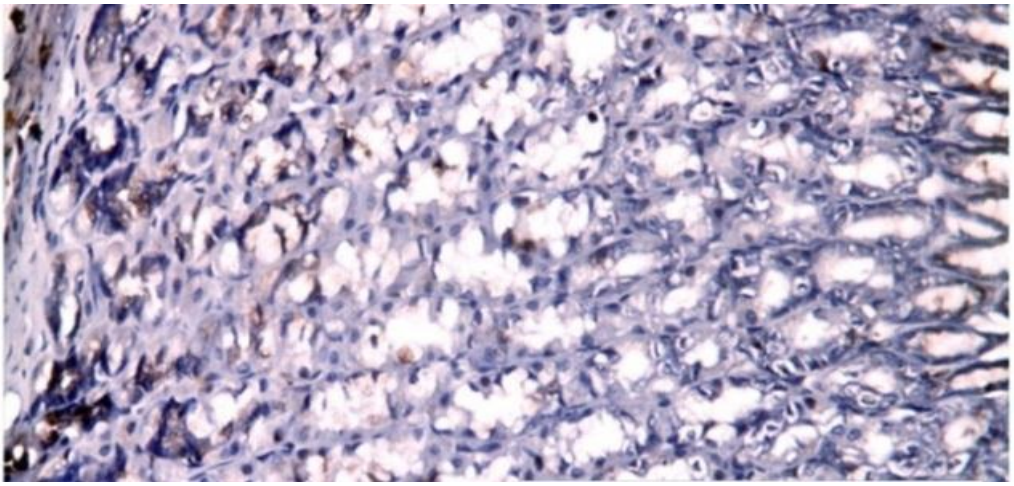


Figure.12 Group V: (MEBF) [400mg/kg

Group-I: Control (Non-treated group)

Section studied shows mucosal ulceration consisting of predominantly necrosis, degenerated epithelial cells with moderate inflammatory infiltration comprising of aggregates of macrophages and neutrophils. The submucosa shows severe edema. **(**Figure.8).

Group II: Ranitidine [100mg/kg].

Section studied shows intact mucosa with regenerative epithelial cells and mild inflammatory infiltration. The submucosa and muscularis propria appears normal. **(**Figure.9).

Group III: (Aqueous Extract of BF) [400mg/kg].

Section studied shows focal mucosal ulceration Mediating the mucosal epithelial cells are seen direct fiery invasion with couple of regenerative epithelial cells**. (**Figure.10).

Group-IV: (Chloroform extract of BF) [400mg/kg].

Section studied shows focal mucosal ulceration intervening the mucosal epithelial cell, are seen mild inflammatory infiltration with some regenerative epithelial cell. The submucosa shows mild edema with mononuclear inflammatory infiltration. **(**Figure.11)

Group – V: (Methanolic Extract of BF) [400mg/kg].

Section with regenerative epithelial cells and mild inflammatory infiltration. The submucosa and fiery cells with regenerative epithelial cells**.** The submucosa shows up close to typical. The muscularis propria seems unremarkable **(**Figure.12)

Table no.6: Impact of AEBF, MEBF and CEBF on Ulcer Index in Aspirin InducedUlcer Models.

Group	Treatment	Ulcer index	% Ulcer Protection
Control (Aspirin)	200mg/kg p. o	12.24± 0.321***	0.0
Ranitidine	100 mg/kg p. o	4.302±0.189***	64.85
AEBF	400mg/kg p. o	5.58±0.0324**	*54.41*
CEBF	400mg/kg p. o	7.13±0.0544***	*41.74*
MEBF	400mg/kg p. o	5.023±0.0587**	*58.96*

values are expressed as mean + S.E.M, n=6 and *p<0.05, **P<0.01, ***P<0.001 was considered.

All the *Bauhinia Forficata* extracts has shown a significant anti-ulcer activity there is reduction in ulcer index when equated to control. The pretreatments with MEBF, AEBF and CEBF has reduced gastric lesions compared with control. However, more activity shown by the MEBF at a dose 400mg/kg body weight significant reduction of ulcer index and percentage ulcer protection which is comparable to standard drug ranitidine (100mg/kg) (Table 6, Fig. 13).

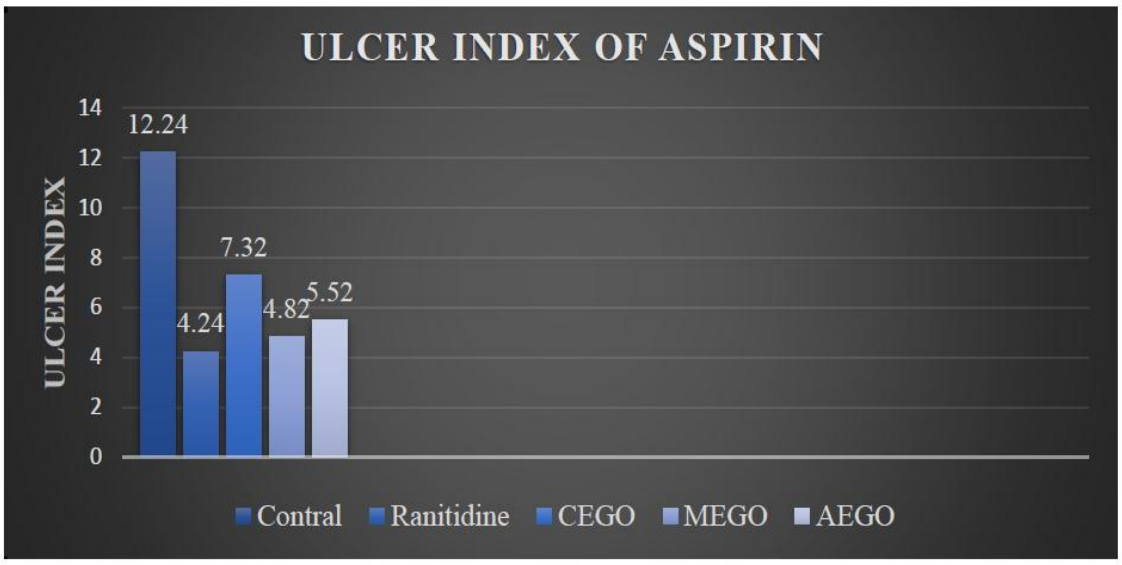


Figure No.13: Impact of various extract of *Bauhinia Forficata* in Ulcer index at Aspirin Induced Ulcer Models.

Table no.7: Impact of various extract of AEBF, MEBF and CEBF on ulcer index in ethanol induced ulcer models.

Group	Treatment	Ulcer index	% ulcer protection
Control	1 ml ethanol for 200gm body wt.	11.54±0.108	*0.0*
Ranitidine	100mg/kg p.o +1ml ethanol for 200gm bodywt	3.82±0.075***	*66.89*
AEBF	400 mg/kg p.o +1ml ethanol for 200gm body wt	6.345±0.124**	*45.01*
CEBF	400 mg/kg p.o +1mlthanol for 200gm body wt	7.88±0.134**	*37.71*
MEBF	400 mg/kg p.o +1ml ethanol for 200gm bodywt	5.24±0.167***	*54.59*

values are expressed as mean + S.E.M, n=6 and *p<0.05, **P<0.01, ***P<0.001 was considered.

All the extracts has shown a significant ulcer healing effect there is reduction in ulcer index when equated to control. However, more activity shown by the MEBF at a dose 400mg/kg body weight significant reduction of ulcer index and percentage ulcer protection which is comparable to standard drug ranitidine (100mg/kg). (Table 7, Fig 14).

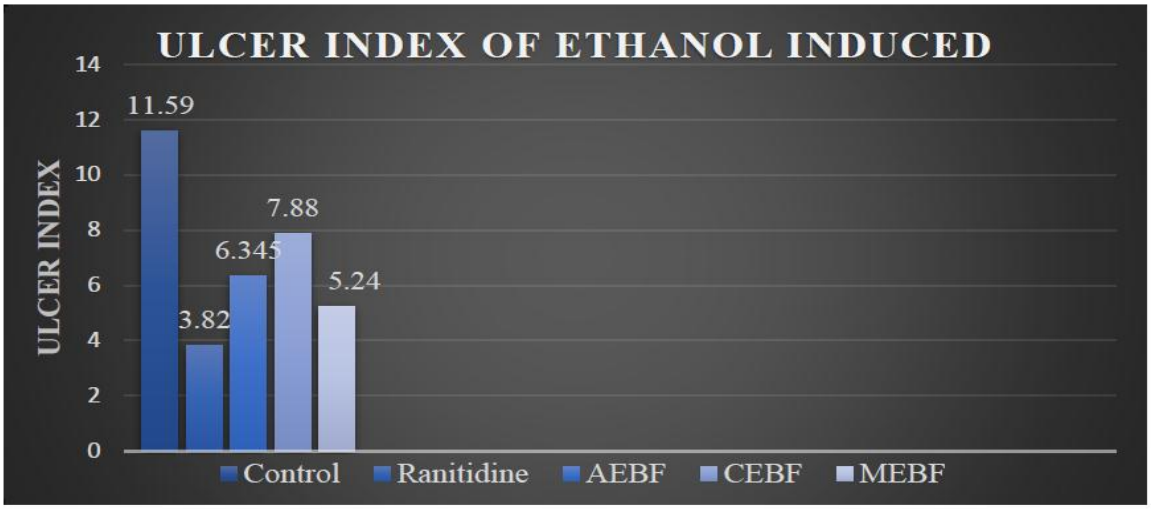


Figure No.14: Impact of various extract of *Bauhinia Forficata* in Ulcer index at Pylorus Ligation caused Ulcer in Rat models.

Table no. 8: Impacts of AEBF, MEBF and CEBF on Ulcer Index in Swimming Stress Induced Gastric ulcer models.

Group	Treatment	Ulcer index	% Ulcer Protection
Control	1 ml saline	10.64±0.142***	0.0
Ranitidine	100 mg/kg p. o	3.76±0.019**	*64.66*
AEBF	400mg/kg p. o	5.59±0.164***	*47.46*
CEBF	400mg/kg p. o	7.42±0.087**	*30.26*
MEBF	400mg/kg p. o	5.057±0.139**	*52.47*

values are expressed as mean + S.E.M, n=6 and *p<0.05, **P<0.01, ***P<0.001 was considered.

In stress induce model methanol extract show more significant reduction of ulcer index (P<0.001**) and increase percentage ulcer protection which is comparable to standard drug ranitidine (100mg/kg). (Table 8, Fig 15).

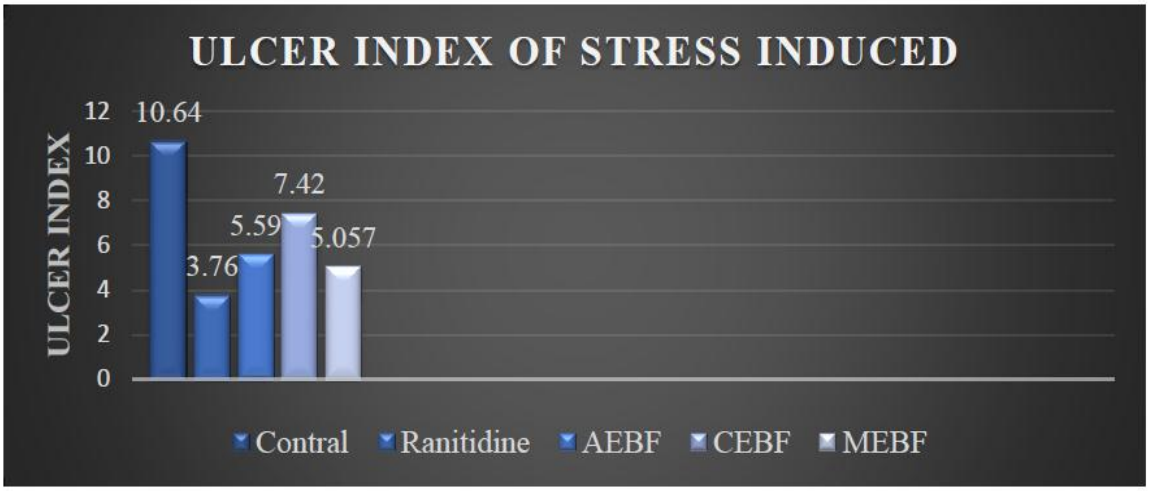


Figure No.15: Impact of various extract of *Bauhinia Forficata* in Ulcer index on Swimming Stress Induced Gastric ulcer models.

DISCUSSION

The natural plants are imperative choice to for treatment peptic ulcer disease. The *Bauhinia Forficata leaves* extracts by Preliminary Qualitative Phytochemical Tests shown Alkaloids, Carbohydrate, Flavonoids, Glycosides, Phytosterols/Terpens oils Protein, Tannins and Saponins and TLC shown Alkaloids, Flavonoids and Teraponids.

The Phytochemical constituent of such as flavonoids, tannins, saponins, terpenoids may show anti-ulcer activity due to their Cytoprotecting, Antisecretory and Antioxidant property. The Phyto-biochemical compounds which assist as drugs, may be providing newer path and evidences for modern drug design through synthesise. Thus, plant base drugs are better source for our society and show minimize toxic effect as well as improved outcome to treatment peptic ulcer, dyspepsia and may more diseases in future.

In pylorus ligation, the ulcer is delivered by excess discharge of pepsin and gastric acids and most reduced pH. Various parameters were contemplated in pylorus ligation show comparable pH, free acidity, total acidity, gastric volume, ulcer index and histopathological deliberates study. The pylorus ligation is one of the vital model to screen the antiulcer action for assessment of effectiveness of extracts. An expansion in acidic pepsin aggregation because of pyloric deterrent and ensuing mucosal processing is the known method of the

enlistment of ulcer. The counter ulcer activities of laves of *Bauhinia Forficata* extracts such as methanol, Aqueous and Chloroform in pylorus ligation is having a checked decrease in the quantity of total acidity, free acidity, gastric volume and ulcer index as well as increase in PH and total protein. Histopathological tissue harms and ulcer index by contrasting and control and standard medication ranitidine in rats.

Aspirin model show is brought ulcer because of the COX-1 blockage which comes about the reduction of prostaglandin production. So, there will be an elevation in the lipoxigenase pathway and leukotriene. This present leukotrene's will cause ulcer in Aspirin drug-initiated model. An expansion in acid discharge and back dispersion of H+ is sensible for the gastric mucosal injury prompted by aspirin medicine. In the control gathering of aspirin treatment has indicated extreme ulcer scores by ulcer index. The diverse concentrates of *Bauhinia Forficata* such as MEBF, AEBF and CEBF were demonstrated a critical decrease of ulcer index contrasted and the control and the ranitidine as standard.

Restraint water immersion anxiety model is models to deliver ulcer by push. Stress is having an important part in the ulcer etiology. It is most likely intervened by histamine liberation by improvement in acid emission and a diminishment in mucin production. The elevated motility of stomach by swimming is likewise an explanation behind encouraging ulcer. The obviously expanded lipid peroxides and mucosal harms cause the expansion of ulcer scores in the control group. In this examination, it was discovered that the MEBF were demonstrated more dynamic contrasted and different concentrates in controlling ulcer score numbers. The decrease of ulcer score by the various extracts of *Bauhinia Forficata* had shown remarkable in in stress induced model. Here the defensive activity of 400mg/kg measurements of MEBF, AEBF and CEBF were discovered a remarkable diminishment of ulcer score contrasted and control.

Ethanol began screening model for ulcer is typically utilized method to evaluate the counter ulcer action. Here we applied 1ml/200gm of ethanol for elevation ulcer. The manifestations were predominant in the glandular piece of stomach tissues. It is because of the prolonged ejection of protein by the gastric divider, declines glutathione level in gastric mucosa and builds the generation of free radical via ethanol. The investigations uncovered that the ethanol is constantly having the ulcer modulatory activity in the stomach. Treatment with many concentrates of *Bauhinia Forficata* were having a outstanding lessening of ulcer score through contrasting and the control. The exercises were proved that the Methanol extract of

the leaves is more productive to treat ulcer contrasted with different concentrates. The 400 mg/kg of concentrate has given for treated control groups and Ranitidine.

In every one of the models, we considered ulcer index with compared with control and standard ranitidine.

Pharmacologic activities which could be a hint to investigate use of herbal as therapeutic agents. Hence, this may be useful to discover safer substitute for Ulcer management for numerous illnesses.

CONCLUSION

The Methanolic, Aqueous and Chloroform extracts of Bauhinia Forficata for anti-ulcer activities was concluded with a positive response in ulcer induced models such as pylorus ligation, aspirin induced, swimming stress and ethanol induced models and with standard drug i.e., ranitidine. The activity is shown in all the three extracts at a dose of 400 mg/kg body weight. The standard drug dose was took at 100 mg/kg of animal body weight. In acute toxicity studies the extracts were shown safety upto the dose of 4000mg/kg body weight. From this research I am conclude that entirely extract of Bauhinia Forficata leaves having significant anti-ulcer activity in gastric ulcer models of rats but out of that methanolic and aqueous extracts had more potent.

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