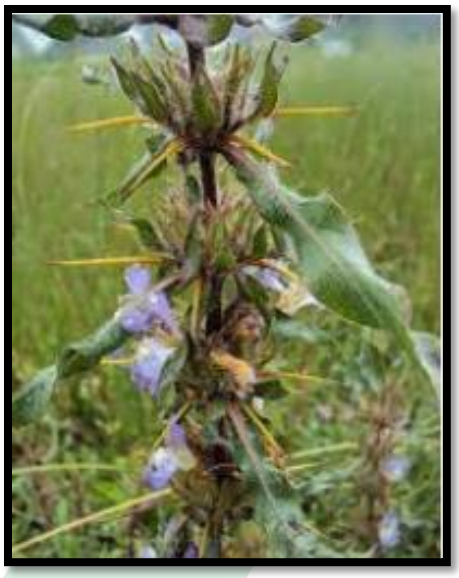
Hygrophia spinosa



TAXONOMICAL CLASSIFICATION:[1]

- *Kingdom: Plantae*
- *Division: Angiospermae*
- *Order: Personales*
- *Family: Acanthaceae*
- *Genus: Hygrophila*

INTRODUCTION:[2-4]

H. spinosa T. Anders syn. H. auriculata (Schum.) Hiene; Asteracantha longifolia (Linn.) Nees. It is a herb growing in wet places. A stout herb; stems fasciculate, subquadrangular, erect, 0.6–1.5 m tall, thickened at the nodes, hispid with long hairs; with axillary spines, leaves 9 × 1 cm, hairy, oblanceolate, in whorls. Flowers 2–3 cm long, purple-blue, bilabiate, in whorls. Fruits capsule, 8 mm long, 4–8 seeded. Phytochemically, the whole plant contains phytosterols, tannins, carbohydrates, flavonoids, terpenoids, and sterols. Analysis of the oil from the seeds and reported the presence of uronic, palmitic, stearic, oleic, and linoleic acids. Apigenin7-O-glucuronide and apigenin-7-oglucoside were isolated from the flowers and lupeol, betulin, and stigmasterol were isolated from the plant. Alkaloids, steroids, tannins, proteins, flavonoids, carbohydrates, fats, and oils were isolated from the roots. Moreover, the leaves show the presence of alkaloids, carbohydrates, proteins, steroids, glycosides, flavonoids, tannins, phenolic compounds, fats, and oils. The high-performance thin layer chromatography analysis revealed the presence of phytosterols, namely, β-sitosterol and lupeol. Maximum content of lupeol was found in the roots (0.25%), whereas the maximum content of β-sitosterol was found in the leaves (0.069%) of Asteracantha longifolia. Other isolated chemical constituents include betulin, 25-oxo-hentriacontanyl acetate, and methyl8- n-hexyltetracosanoate.

PROPERTIES AND USES: [5]

- In Gonorrhoea
- In spermatorrhoea
- In jaundice
- In rheumatism
- In diseases of urinogenital tract
- As tonic
- As acrid, bitter
- As sedative
- Antipyretic
- In diseases of the blood
- As diuretic
- As demulcent
- As nutritive
- As stimulant
- Antiinflammatory
- In asthma
- In diarrhea
- In leucorrhoea
- As liver tonic
- As nervine tonic
- In anaemia

- In renal and vasical calculi
- In arresting abortion
- In lithiasis

SIDE EFFECTS OF EXCESS CONSUMPTION:[7]

Nausea

Headache

DOSAGE: [6]

Powder – 3-5 gm

Decoction – 5- 10 ml

RESEARCH:

1. The anti-inflammatory activity of the various extracts was studied based on their effects on carrageenan-induced paw oedema in rats while antipyretic activity was evaluated on the basis of their effect on Brewer's yeast-induced pyrexia in rats. The extracts were screened for alkaloids, steroids, proteins, flavonoids, saponins, mucilage, carbohydrates, organic acids, fats and oils. Preliminary phytochemical screening revealed the presence of alkaloids, steroids, proteins, flavonoids, fats and oils, tannins, mucilage and organic acids in the leaves of H. spinosa. Chloroform and alcoholic extracts of leaves of H. spinosa produced significant ($p < 0.05$ and $p < 0.01$) anti-inflammatory and antipyretic activities in a dose-dependent manner. On the other hand, petroleum ether and aqueous extracts did not show significant anti-inflammatory and antipyretic activities. The maximum anti-inflammatory activities produced by chloroform and alcoholic extracts (400 mg/kg) were 33.7% and 47.5%, respectively. These two extracts also reduced elevated body temperature in rats at 200 and 400 mg/kg body weight doses throughout the observation period of 6 h. Chloroform and alcoholic extracts of H. spinosa leaves have anti-inflammatory and antipyretic activities. [8]
2. The antilithiatic effect of Hygrophilaspinosa (Acanthaceae) was determined on ethylene glycol ind uced lithiasis in male albino rats. The lithiasis was induced to rats by oral consumption of ethylene glycolated water (0.75v/v) for 28 days. Aqueous extract of Hygrophila spinosa

(200mg/kg) was administered orally from 1st day for preventive regimen and from 15th day for curative regimen. The urinary ionic parameters were altered by ethylene glycol, which elevated the calcium, oxalate, inorganic phosphate, protein concentration in urine. The Hygrophila spinosa significantly
(P<0.01) reduced the elevated levels of these ions and protein in urine. Also the extract significantl y (P<0.01) elevated the urinary concentration of magnesium. The elevated serum creatinine levels of lithiatic rats were reduced by prophylactic and curative regimen of extract treatment. The histological findings also showed improvement after treatment with the extract. These observations enable to conclude that the curative and
preventive properties of Hygrophila spinosa against ethylene glycol induced urolithiasis. [9]

PRECAUTIONS & WARNINGS: [6]

- Avoid Kokilaksha or use only under medical supervision during breastfeeding.
- Avoid Kokilaksha or use only under medical supervision during pregnancy.

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