Clivers

Species (Family)

Galium aparine L. (Rubiaceae)

Synonym(s)

Cleavers, Galium, Goosegrass

Part(s) Used

Herb

Pharmacopoeial and Other Monographs

BHC 1992[G6]
BHP 1996[G9]
Martindale 32nd edition[G43]
PDR for Herbal Medicines 2nd edition[G36]

Legal Category (Licensed Products)

GSL[G37]

Constituents[G6,G34,G40,G44,G48,G64]

Acids Caffeic acid, *p*-coumaric acid, gallic acid, *p*-hydroxybenzoic acid, salicylic acid and citric acid.[1]

Coumarins Unspecified. Scopoletin and umbelliferone reported for related species *Galium cruciata* and *Galium tauricum*.[2]

Iridoids Asperuloside (rubichloric acid), monotropein.[3,4]

Tannins Unspecified;[5] gallic acid is usually associated with hydrolysable tannins.

Other constituents Alkanes (C_{19}–C_{31}),[4] flavonoids.

Other plant parts Anthraquinones have been documented for the roots, but not for the aerial parts.[1]

Food Use

Clivers is not used in foods.

Herbal Use

Clivers is stated to possess diuretic and mild astringent properties. It has been used for dysuria, lymphadenitis, psoriasis, and specifically for enlarged lymph nodes.[G6,G7,G8,G64]

Dosage

Dried herb 2–4 g or by infusion three times daily.[G6,G7]

Liquid extract 2–4 mL (1:1 in 25% alcohol) three times daily.[G6,G7]

Expressed juice 3–15 mL three times daily.[G6,G7]

Pharmacological Actions

In vitro and animal studies

None documented for clivers. Asperuloside and monotropein have been reported to elicit a mild laxative action in mice.[6] The action was stated to be approximately 15 times less potent than that of senna, and of shorter duration.

Clinical studies

None documented. Tannins are known to possess astringent activities.

Side-effects, Toxicity

None documented.

Contra-indications, Warnings

It has been stated that diabetics should only use the expressed juice with caution[G34] although no pharmacological data were located to support this statement.

Pregnancy and lactation In view of the lack of pharmacological and toxicological information, the use of clivers during pregnancy should be avoided.

Pharmaceutical Comment

Limited chemical information is available for clivers. No scientific evidence was found to support the herbal uses, although documented tannin constituents may account for the reputed mild astringent action. In view of the paucity of toxicity data, excessive use of clivers should be avoided.

References

See also General References G6, G9, G34, G36, G37, G40, G43, G48, G49 and G64.

1 Hegnauer R. *Chemotaxonomie der Pflanzen*, vol 6. Basel and Stuttgart: Birhauser Verlag, 1973: 158–159.
2 Borisov MI. Coumarins of the genus Asperula and Galium. *Khim Prir Soedin* 1974; 10: 82.
3 Grimshaw J. Structure of asperuloside. *Chem Ind* 1961: 403–404.
4 Corrigan D *et al.* Iridoids and alkanes in twelve species of *Galium* and *Asperula*. *Phytochemistry* 1978; 17: 1131–1133.
5 Buckova A *et al.* Contents of tannins in some species of the Asperula and Galium genera. *Acta Fac Pharm Univ Comeniana* 1970; 19: 7–28.
6 Inouye H *et al.* Purgative activities of iridoid glucosides. *Planta Med* 1974; 25: 285–288.