WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Manjistha: Blood Purifying Herbs.

Pratiksha Bhausaheb Sangale, Ms. Jyoti Pawar

B Pharmacy Dr Naikwadi College of Pharmacy A/P jamgaon Tal-Sinner Dist-Nashik 422103 Maharashtra India.

ABSTRACT

Rubia cordifolia (family: Rubiaceae) L (R. cordifolia) is a lasting natural medication climbing plant. As the fundamental piece of the conventional Chinese medication, the rhizome has a long history. An incredible number of scholarly investigations have revealed that it tends to be utilized to improve blood flow, hemostasis, initiation of guarantees, and so forth. With regards to the wide use of R. cordifolia in conventional medication, we methodicallly audit its customary purposes, phytochemistry and pharmacological impacts. Written works were methodicallly looked through utilizing a few logical information bases, including China Public Information Framework (CNKI), Baidu Researcher, PubMed, Web of Science, and other expert sites. Kew Professional flowerbed and the iPlant were utilized for getting the logical names and plant pictures of R. cordifolia. What's more, other data was additionally assembled from books including customary Chinese natural medication, the Chinese Pharmacopeia, and Chinese Materia Medica. Up until this point, numerous solutions containing R. cordifolia have been broadly utilized in the clinical treatment of strange uterine dying, essential dysmenorrhea and other gynecological illnesses, unfavorably susceptible purpura, renal drain and different sicknesses. The phytochemistry studies have announced that in excess of 100 mixtures are tracked down in R. cordifolia, like bicyclic peptides, terpenes, polysaccharides, minor components, flavonoids, and quinones. Among them, quinones and peptides are the sorts of parts with the most elevated contents in R. cordifolia. The advanced pharmacological investigations have uncovered that R. cordifolia and its inferred parts have hostile to growth, against oxidative, against platelet conglomeration, and mitigating impacts. Notwithstanding, most examinations are preclinical. The pharmacological system of R. cordifolia has not been totally examined. Furthermore, there are not many pharmacokinetic and poisonousness investigations of R. cordifolia, consequently the clinical wellbeing information for R. cordifolia is inadequate. To summarize, this survey interestingly sums up a foundational and incorporated conventional purposes, compound organizations, pharmacological activities and clinical utilizations of R. cordifolia, which gives the novel and full-scale understanding for the medication advancement, therapeutic worth, and use of R. cordifolia later on.

Synonyms

Ayurveda, Manjistha, Rubia Cordifolia linn, Root, Desh.

Introduction

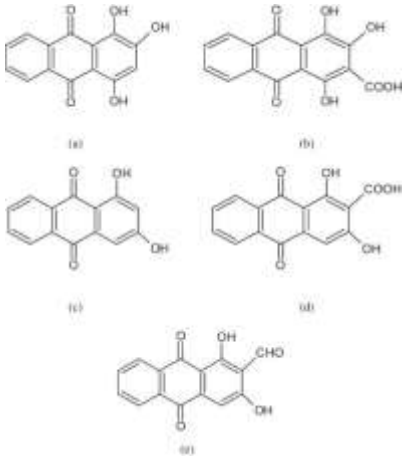
In India, prescriptions in view of natural beginning have been the premise of treatment and solution for different sicknesses. In addition, Indian people medication contains various solutions for remedial purposes like recuperating of wounds, aggravation, skin contaminations, uncleanliness, diarrhorea, scabies, vene-genuine sickness, ulcers, snake chomp, and so on Over 80% of the world's popula-tion actually relies on customary drugs for different skin sicknesses. Home grown meds in injury the board include sanitization, debridement and giving a damp climate to energize the foundation of the reasonable climate for normal mending process/341.

Rubia cordifolia (Rubiaceae) is otherwise called, Manjishtha, In-dian madder which is appropriated all through India. It is tracked down all through the bumpy areas of India from northwest Himalayas eastwards, climbing to 8000 ft and southwards to Ceylon. The foundations of this plant are of high medici-nal esteem and are perceived as true 6. This enduring herbaceous thorny creeper or climber is upto 10m long, found all through the nation rise ing to 3750 m and fill well in light (sandy), medium (loamy) and weighty (mud) soils. The family Rubiaceae contains around 450 genera and 6500 spe-cies and incorporates trees, bushes and rarely spices. Rubia cordifolia L. (Rubiaceae), otherwise called 'manjistha', is an enduring, herbaceous climbing plant, with extremely lengthy roots, round and hollow, flexuous, with a slender red bark. Stems frequently have a long, harsh, scored, woody base. Plants having a place with this family are known to contain significant measures of anthraquinones, espe-cially in the roots. The customary restorative utilization of the plant has been for skin disor-ders and for anticancer action. Moreover, the anthraquinones of the Rubiaceae family show some intriguing with regards to vivo organic exercises, such fas against growth, hostile to inflammatory, urinary disorders!!!!, antistress antimi-crobial , hepatoprotective, radio protective, and anticancer[1], hostile to microbial, antifungal, hypotensive, pain relieving, antimalarial, cell reinforcement, against leukemic and mutagenic capabilities, immunomodulatory against inflamma-conservative and antioxidant. Aside from its restorative worth, this plant has likewise been utilized as normal food colorants and as regular hair colors. The interest in the separation of normal colors and shading matters is expanding because of their applications in food, drugs and other human consumptions. This plant has likewise been recorded authoritatively as natural medication in the Chinese Pharmacopeia for the treat-ment of joint pain, dysmenorrhea, hematorrhea and hemostasis which are free extremist related sicknesses. It has various purposes like blood purifier. It is useful in treating skin sicknesses, in blood decontamination, expanding hunger and in feeling and compression of uterus.

Figure

Scientific Classification of Rubia

Kingdom : Plantae Class : Dicotyledoneae Subclass : Sympetalae Order : Rubiales Family : Rubiaceace Genus : Rubia Species : Cordifolia Structure



Chemical constituents

This extraordinary spice shows the presence of bio dynamic constituents like purpurin, munjistin, xanthopurpurin, pseudopurpurin and glycosides like rubiadin, rubiprasin A,B,C, ruiearbonls, aborane triterpenoids, mangistin, 1-hydroxy 2-methoxy anthraquinone, 3-dimethoxy 2 carboxy anthraquinone, alizarin, garancin, mollugin and furomollugin. Enhanced with these phyto-synthetic parts, Manjistha depicts strong hepatoprotective, against splenomegaly, hostile to hepatomegaly, cholagogue, against pyretic, spleno-defensive, detoxifying, febrifuge, stomach related, calming, broncho-slow,

torment easing, hostile to microbial properties. Furthermore, in the long run these properties widely help in treating and giving alleviation from jaundice, liver diseases, skin conditions including pimple, dermatitis, psoriasis and vitiligo, heartburn, clogging, loose bowels, fever, sensitivity, asthma, blood contaminations, and rheumatoid joint pain.

Pharmacological activity

madraspatana stem-bark, Rubia condifolia root and Lantana camara root-bark, ready with solvents of various extremity. was assessed by the agar well dissemination technique. Twelve microorganisms, six each ach of gram-positive and gram-negative strains, were utilized in this review. Chloroform and methanol concentrates of R. cordifolia and L. camara was viewed as more unambiguous towards the gram-positive

strains, albeit gramnegative P. aeruginosa was likewise hindered by the methanol concentrates of both eruginosa these plants in a portion subordinate way. R. cordifolia was essentially dynamic against B. subtilis and S. aureus contrasted and streptomycin and penicillin G utilized as principles.

Wound Mending Action

Evaluation of Twisted Recuperating of a polyherbal detailing containing Rubia cordifolia was finished. Cream definition of the natural medication blend of R. cordifolia, C. asiatica, T. belerica, P. zeylanica, and W.somnifera was formed. Creatures were investigated everyday up to twentieth days and recuperating was surveyed in light of actual boundary in particular, injury withdrawal, time of epithelization and histological review. It advances constriction and epithelization of extraction wound. A few medications of plant, mineral and creature beginning are depicted in the I in the Ayurveda eveda for their injury recuperating properties under the term 'vranaropaka". R. cordifolia was additionally observed to be successful in trial models Psoriasis is skin jumble portrayed by hyperproliferation and deviant separation of epidermal keratinocytes. Ethyl acetic acid derivation (EA) part of Radix Rubiae hinders cell development and advances terminal separation in refined human keratinocytes which firmly recommend its antipsoriatic movement. Assessment is finished by comified envelope (CE) development examine showed that EA part of Radix Rubiae fundamentally highlighted the CE arrangement, a very much perceived marker of terminal separation, in refined HEK and HaCaT cells in a portion and time subordinate way.

Antioxidant

R. cordifolia separates were likewise assessed for cancer prevention agent and lipid peroxidation inhibitory action by 1, 1-diphenyl-2-picryl-hydrazyl and Ski lifts Thiobarbituric corrosive responsive substances strategy individually. Concentrate of R. cordifolia showed a critical inhibitory movement against Propioni bacterium acnes normalized culture. The assessment was done by stock weakening strategy; proposed MIC of R cordifolia separate was 600µg/ml. The methanolic concentrate of R cordifolia showed huge lipid peroxidation inhibitory action The IC50 worth of 138µg/ml and R2 was 0.9921. The outcome was contrasted and curcumin standard (ICSO 50µg/ml, R2 0.9469). These examinations have uncovered R cordifolia as a promising enemy of skin break out specialist since it inhihits the multiplication of Propioni bacterium acnes and consequently forestalls its ramifications.

Anticancer action

Malignant growth is the most wrecking infection and driving reason for de ath all through the world. Regular medications are under investigatio for their particular cytotoxicity to malignant growth cells. Methanol frac tion of Rubia cordifolia remove showed powerful inhihition of Human cervical malignant growth cell line and Human laryns carcinoma cell line while was viewed as less cytotoxic against ordinary b uman kidney cells showing wellbeing for typical cells, Rubia co rdifolia a can be e a wellspring of intense pharmacophore for treatment of illness like disease.

Calming and Pain relieving action

The current review was expected to examine the pain relieving and calming impact of the methanolic concentrate of base of Rubia cordifolia in rodents. Rubia condifolia (100-300 mg/kg. p. 0.) was assessed for its calming movement via carrageenan incited rodent paw edema and Rubia cordifolia (200-400 mg/kg) for its pain relieving action by tail flick technique. Rubia cordifolia (100-300 mg/kg. p. 6.) showed critical ($P<0.05$) decrease in the paw edema delivered by the carrageenan and huge ($P<0.05$) expanded response time in tail flick test. R. cordifolia is viewed as customarily helpful as a pain relieving, astringent, outside application in irritations, ulcers and skin illnesses (Khalid, 1995). The plant is additionally professed to let the side effects free from pruritus, consuming and exudation from skin (Nadkarni, 1976). During concentrates on in patients with dermatitis, the effective use of the plant. showed a half decrease in the seriousness score in the span of 4 days, the oedema, exudation and tingling heing essentially feeling better (4) (Bapalal, 1965). R. cordifolia was read up for the mitigating impact in rodents with carrageenan paw oedema. The plant showed critical mitigating movement at a portion of 10 and 20 ml/kg of the water removes. The movement was tantamount to that of phenylbutazone (100 mg/kg) (Antarkar et al. 1983), R. cordifolia restrained the lipoxygenase protein pathway and the development of cumene hydroperoxides. The lipoxygenase pathway catalyzes the creation of different provocative go betweens, for example, the leukotrienes which are associated with asthma, joint pain, and other incendiary issues.

Hepatoprotective Movement

The of R. hepatoprotective movement of an aqueousmethanol extricate cordifolia was examined against acetaminophen and CC14-instigated hepatic harm. Acetaminophen delivered 100 percent mortality at a portion of 1 g/kg in mice while pretreatment of creatures with R. cordifolia remove decreased mortality to 30%. Acetaminophen at a portion of 640 mg/kg delivered liver harm in rodents as appeared by the ascent in serum levels of glutamic oxaloacetic transaminase (SGOT) and glutamate pyruvate transaminase (SGPT). Pretreatment of rodents with R. cordifolia extricate brought down fundamentally the SGOT and SGPT levels. Additionally, hepatotoxic portion of CC14 raised the SGOT and SGPT levels individually contrasted and separate control. A similar portion of R. cordifolia had the option to forestall fundamentally the CCI4-prompted ascend in serum chemicals and the

assessed upsides of SGOT and SGPT. In addition, it forestalled CC14-prompted prolongation in pentobarbital-actuated rest affirming the hepatoprotective impacts of the concentrate. laonational Jenamal of Physiology, Nuties and Actual Training.

Hostile to platelet initiating factor action

R. cordifolia is clinically utilized for the filtration of blood by the doctors of the Indian Frameworks of Medication. The impact of the to some degree refined part of this entire plant had been concentrated on hare platelets. It hindered the platelet total prompted by PAF (platelet enacting factor) however not thrombin. PAF (platelet enacting factor) is a phospholipids engaged with apoplexy, sensitivity and apprehensive problems. R. cordifolia separate likewise restrained the limiting of 3H marked PAF to the platelets in the portion subordinate way. Subsequently apparently R. cordifolia restrains activity of PAF at its receptor level either by its impeding or by desensitization Hostile to skin inflammation property Propionibacterium acnes, an anaerobic microbe, plays an significant job in the pathogenesis of skin break out by prompting specific fiery middle people. These arbiters incorporate receptive oxygen species (ROS) and pre-incendiary cytokines. In the review, ROS, interleukin-8 (IL-8) and growth corruption factor-Y (TNF-Y) were utilized as the significant measures for the assessment of hostile to inflanumatory action. The polymorphonuclear leukocytes (PMNL) and monocytes were treated with culture supernatant of P. acnes in the presence or nonappearance of spice. It Conclusions Rubia cordifolia commonly known as Manjistha or Indian madder is a rich source of anthraquinones responsible for its traditional, phytochemical and pharmacological activities. Today clinical investigations of herbal formulations and their market preparations, both are on demanding because of better safety and efficacy without or minimal side effects. Manjistha stem describes as cure for snake bite and scorpion sting. It is also effective un non-healing diabetic foot ulcer. Manjistha having cooling effect in the body and therefore, traditionally used for chronic pyrexia and puerperal fever. It is a popular remedy for the relief of heat and itching in eczema, psoriasis, herpes, and scabies and also reported successful in treatment of vitiligo when given with honey. Manjistha has been reported for the presence of glycosides, saponins, anthraquinones, tannins, hexapeptides, quinones, and triterpenoids. R. cordifolia is an important medicinal plant commonly used in the traditional system of medicine for treatment of different ailments. This review illustrates its major constituents, pharmacological actions substantiating the claims made about this plant in the traditional system of medicine and its clinical applications. latertutional foumal of Physiology, Nutrition and Physical Education.

Anti-platelet activating factor activity

R. cordifolia is clinically used for the purification of blood by the physicians of the Indian Systems of Medicine. The effect of the partially purified fraction of this whole plant had been. studied on rabbit platelets. It inhibited the platelet aggregation induced by PAF (platelet activating factor) but not thrombin. PAF (platelet activating factor) is a phospholipids involved in thrombosis, allergy and nervous disorders. R. cordifolia extract also inhibited the binding of 3H labeled-PAF to the platelets in the dose-dependent manner. Thus it appears that R. cordifolia inhibits action of PAF at its receptor level either by its blocking or by desensitization.

Anti-acne property

Propionibacterium acnes, an anaerobic pathogen, plays an important role in the pathogenesis of acne by inducing certain inflammatory mediators. These mediators include reactive oxygen species (ROS) and pro-inflammatory cytokines. In the study, ROS, interleukin-8 (IL-8) and tumor necrosis factor-Y (TNF-Y) were used as the major criteria for the evaluation of anti-inflammatory activity. The polymorphonuclear leukocytes (PMNL) and monocytes were treated with culture supernatant of P. acnes in the presence or absence of herb. It was found that R. cordifolia caused a statistically significant suppression of ROS from PMNI.. Thus, R. cordifolia showed anti-inflammatory activity by suppressing the capacity of P. acnes-induced ROS and proinflammatory cytokines, the two. important inflammatory mediators in acne pathogenesis.

Anxiolytic Activity

Mice treated with triterpenes isolated from the petroleum ether extract of R. cordifolia exhibited anxiogenic activity by remaining for most of the time in the closed arm 38. Whereas, the ethanolic extract exhibited anxiolytic activity as indicated by a significant increase in open arm occupancy.

Anti-allergic Activity

Alcoholic extract of R. cordifolia inhibited passive cutaneous anaphylaxis (PCA) in the mouse and rat.

Radio Protective Property

Radio protective potential of alcoholic extract of root of Manjistha showed a Ia significant radiation protection (67%) as assessed by increased animal survival when R. cordifolia extract was administered intraperitoneally before radiation. exposure. Results suggest the alcoholic root extract provides protection against radiation-induced lipid peroxidation, hemopoietic injury and genotoxicity.

Anti-HIV Activity

Assessment of anti-HIV activity of various extracts prepared from Indian medicinal plants. The plants were chosen on the basis of similarity of chemical constituents with reported anti- HIV compounds or on the basis of their traditional usage as immunomodulators. Different extracts were prepared by Soxhlet extraction and liquid-liquid partitioning. Ninety-two extracts were prepared from 23 plants. Anti-HIV activity was measured in a human CD4+ T-cell line, CEM-GFP cells infected with HIV-INL4.3. Nine extracts of 8 different plants significantly reduced viral production in CEM-GFP cells infected with HIV-INL43. Aegle marmelos, Argemone mexicana, Asparagus racemosus, Coleus forskohlii, and Rubia cordifolia demonstrated promising anti-HIV potential.

Conclusions

Rubia cordifolia commonly known as Manjistha or Indian madder is a rich source of anthraquinones responsible for its traditional, phytochemical and pharmacological activities. Today clinical investigations of herbal formulations and their market preparations, both are on demanding because of better safety and efficacy without or minimal side effects. Manjistha stem describes as cure for snake bite and scorpion sting. It is also effective on non-healing diabetic foot ulcer. Manjistha having cooling effect in the body and therefore, traditionally used for chronic pyrexia and puerperal fever. It is a popular remedy for the relief of heat and itching in eczema, psoriasis, herpes, and scabies and also reported successful in treatment of vitiligo when given with honey. Manjistha has been reported for the presence of glycosides, saponins, anthraquinones, tannins, hexapeptides, quinones, and triterpenoids. R. cordifolia is an important medicinal plant commonly used in the traditional system of medicine for treatment of different ailments. This review illustrates its major constituents, pharmacological actions substantiating the claims made about this plant in the traditional system of medicine and its clinical applications.

Reference

1. Abdullah S. T., Ali A., Hamid H., Ali M., Ansari S. H., Alam M. S. (2003). Two new anthraquinones from the roots of Rubia cordifolia Linn. Pharmazie 58 (3), 216–217. 10.1023/A:1024895515316 [PubMed] [CrossRef] [Google Scholar]
2. Babu M, Gnanamani A, Radhakrishan N. Priya K. 2002. Healing potential of Datura alba on burn wounds in albino rats. J Ethnopharmacology 83: 193- 199.
3. https://Netmeds.com
4. Diagram or figure by Google.
5. . Sofowora A. Medicinal Plants and Traditional Medicine in Africa Johnwiley, New York, 1984, 256-257.
6. Bailey CJ. Day C. Traditional plants medicines as treatments for diabetes. Diabetes Care. 1989, 12(8):552-556.
7. Badyal DK, Lata H, Dadhich AP. Animal models of hypertension and effect of drugs. Indian Journal of Pharmacology. 2003; 35:349-362.
8. The Ayurvedic pharmacopoeia of India. Ministry of health and family welfare, department of ayush, 3:112.
9. Chopra RN, Nayar Chopra SL., IC. In Glossary of Indian medicinal plants, Council of Scientific and Industrial Research, New Delhi, 1956, 7. Singh R, Geetanjali, Chauhan SM. 9,
10. National Institute of health and government.
11. Biswas TK, Maity LN, Mukherjee B. 2004. Wound healing potential of Pterocarpus santalinus Linn: a pharmacological evaluation. International Journal of Low Extreme Wounds 3: 143-150.
12. Mukherjee PK, Mukherjee K, Pal M, Saha BP. 2000. Wound healing potential of Nelumbo nucifera (Nymphaceae) rhizome extract. Phytomedicine 7: 66-73.
13. Babu M, Gnanamani A, Radhakrishan N. Priya K. 2002. Healing potential of Datura alba on burn wounds in albino rats. J Ethnopharmacology 83: 193- 199.
14. Purna SK, Babu M. 2000. Collagen based dressings/a review. Burns 26: 54-62.
15. Rao GM, Rao CV, Pushpagandan P. 2006. Hepatoprotective effects of rubiadin, a major constituent of Rubia cordifolia Linn. J Ethnopharmacology 103: 484- 490.
16. More BH, Gadgoli C, Padesi G. 2007. Hepatoprotective activity of Rubia Cordifolia. Pharmacologyonline 3: 73-79.