

Therapeutic and Pharmacological Views of Vatari Guggulu: An Extensive Review

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Vatari Guggulu, a traditional Ayurvedic drug mentioned in the classical Ayurvedic text Bhaisjana Ratnavali, is well known for its extensive use in the treatment of musculoskeletal disorders, especially rheumatoid arthritis (RA), osteoarthritis (OA), sciatica, gout, paraplegia, and inflammatory conditions. It is a synergistic combination of bioactive herbs like Shuddha Gandhaka and castor oil, as well as Haritaki (*Terminalia chebula*), Vibhitaki (*Terminalia bellirica*), Amalaki (*Embllica officinalis*), and Guggulu (*Commiphora mukul*). This review integrates data from preclinical and clinical research on its pharmacological effects, therapeutic activity, safety profile, and quality control. Considering the lack of medicine in allopathic medicine to treat such conditions (except only symptomatic treatment), the importance of formulations that are herbal can fill the vacuum of health needs of the public. Vatari Guggulu presents itself as a potential alternative or adjunct therapy to modern pharmacological interventions; however, it requires additional large-scale studies for its universal acceptance.

Keywords: Guggulu, Arthritis, Amavata, Sciatica, Terminalia, Vatari Guggulu

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Introduction

Guggulu is obtained from pathological gum resin by making an incision on the bark of *Commiphora mukul*, belonging to the family *Burseraceae*.^[1] Guggulu has been mentioned as one of the ingredients for different formulations to treat various diseases in *Charak Samhita*.^[2] Vatari Guggulu is one of the formulations mentioned in *Bhaisajyaratnavali* for the treatment of rheumatoid arthritis, lower back pain, sciatica, gout, paraplegia, and inflammatory conditions.^[3]

Shlokas no. 23 in Sanskrit under the chapter *Aamavatachikitsa Prakarana* in *Bhaisajyaratnavali* give the procedure for the making of the Vatari Guggulu formulation. Furthermore, Shloka number 24 mentions the indications, time, and dose.

Vatari Guggulu

वातारितैलसंयुक्तं गन्धकं पुरसंयुतम् ।
फलत्रययुतं कृत्वा पिष्टयित्वा चिरं रुजी ॥
भक्षयेत्प्रत्यहं प्रातरुष्णतोयानुपानतः ॥ २३ ॥

Shudh Gandhak (purified sulphur), Guggulu, Haritaki, Baheda and Amla, each herbal ingredient, are taken in equal parts and finely powdered. This should be triturated with castor oil in a mortar and pestle. Take this medicine in the morning every day with warm water.

दिनेदिने प्रयोक्तव्यं मासमेकं निरन्तम् ।
आमवातं कटीशूलं गृध्रसी खपङ्गताम् ॥ २४ ॥
वातरक्तं सशोथं च सदाहं क्रोष्टुशीर्षकम् ।
शमयेद्बहुशो दृष्टमपि वैद्यविवर्जितम् ॥ २५ ॥



Figure 1: Ingredients used in Vatari Guggulu
(1) Haritaki - *Terminalia chebula* (2) Amalaki - *Embolica officinalis* (3) Vibhitaki - *Terminalia bellirica* (4) Guggulu - *Commiphora mukul* (5) Castor oil (6) Shuddha Gandhaka.

It is claimed in shloka 23, 24 of *Bhaisajyaratnavali* under chapter *Aamavatachikitsa Prakarana* that if Vatari Guggulu is taken regularly for one month, it will heal the patient of *Amavata* (rheumatoid arthritis), *Katishula* (lower back pain), *Gridhrasi* (sciatica), *Khanja* (limping), *Pangu* (paraplegia), *Vatrakt* (gout), *Sotha* (inflammation), *Dah* (burning pain), *Kroshtukshirsh* (sino-arthritis of knee joints), and all other diseases for which even the physician has left treatment or has given up.

The classical Ayurvedic drug Vatari Guggulu is widely indicated in *Vata* diseases, especially *Ama-vata* (rheumatoid arthritis), *osteoarthritis*, *Gridhrasi* (sciatica), and *Vatarakta* (gout). It represents synergistic blends of bioactive herbs such as *Haritaki* (*Terminalia chebula*), *Vibhitaki* (*Terminalia bellirica*), *Amalaki* (*Embolica officinalis*), *Guggulu* (*Commiphora mukul*), and *Shuddha Gandhaka* and castor oil.^[3]

Methodology

Databases comprising PubMed, Google Scholar, ScienceDirect, and SciFinder were utilized to search for all the relevant information about any mention of the keyword "Vatari" "Guggulu" or "Vatari Guggulu". All the search results were matched, and it was assured nothing in the current literature is left out to date regarding clinical, preclinical studies and other investigational work related to Vatari guggulu. The date range searched was from the before October 2025.

Review of Literature

A number of experimental and clinical studies have been conducted to assess its efficacy and safety scientifically.

Phytochemical

Phytochemical Standardization Krishna et al. (2018) created a method of HPTLC to simultaneously estimate rutin and gallic acid from Vatari Guggulu so that its quality and composition remain consistent according to ICH guidelines.^[4] The medicinal properties and health benefits of guggul (*Commiphora mukul*), along with the phytochemicals found, indicate compounds that can reduce the symptoms of arthritis and joint-related diseases.^[5] Haritaki (*Terminalia chebula*) is one of the most revered plants in Ayurveda. Haritaki contains polyphenols, tannins, and flavonoids. Chebulagic and chebulinic acids are the major tannins present in Haritaki.

The pharmacological effects are mainly due to chebulagic and chebulinic acid.[6] Amalaki (*Emblica officinalis*) contains a wide variety of compounds. It contains ascorbic acid, citric acid, emblicanin A, and emblicanin B.[7]

Pharmacological Profile

Anti-arthritic Activity

Patel and Pundarikakshudu (2016) assessed the anti-arthritic efficacy of an alcoholic extract of Vatari Guggulu in formaldehyde and CFA-induced arthritis models in rats. The formulation markedly inhibited joint swelling and normalized biochemical parameters like WBC count, rheumatoid factor (RF), ESR, lipid profile, and haematological indices without showing acute toxicity at doses up to 2000 mg/kg. Histopathological studies further supported these findings, showing a marked reduction in synovial hyperplasia, pannus formation, and cartilage destruction in treated animals. The extract also prevented bone erosion and maintained normal joint architecture, suggesting a protective effect on connective tissue integrity.[8]

Anti-inflammatory Activity

Panda et al. (2011) compared the anti-inflammatory activity of Vatari Guggulu with Singhanada Guggulu in carrageenan-induced rat paw oedema models. Even though Singhanada Guggulu was suppressed maximally, Vatari Guggulu exhibited mild anti-inflammatory activity, justifying its traditional application. The authors attributed the pharmacological activity of Vatari Guggulu to the synergistic interaction of its herbal ingredients, notably *Commiphora Mukul* (Guggulu), *Ricinus communis* (Eranda), and other constituents known for their anti-inflammatory, analgesic, and antioxidant properties. The mechanism of action was suggested to involve inhibition of inflammatory mediators such as prostaglandins and cytokines, thereby reducing edema formation and tissue inflammation. The findings reinforce therapeutic relevance of Vatari Guggulu as a mild but effective anti-inflammatory agent.[9]

Safety Evaluation

Ala et al. (2024) performed acute and 90-day repeated-dose oral toxicity experiments and concluded that Vatari Guggulu is safe up to 2000 mg/kg in acute and up to 1000 mg/kg in subchronic studies with no noteworthy haematological, biochemical, or histopathological changes.

Haematological and biochemical analyses revealed values within normal physiological limits, suggesting no adverse effects on hepatic, renal, or hematopoietic functions.

Furthermore, histopathological examination of vital organs, including the liver, kidney, heart, spleen, and reproductive organs, showed no signs of inflammation, necrosis, or structural abnormalities, supporting the formulation's systemic safety even at higher dose levels. These findings provide scientific validation for its traditional use in Ayurveda, supporting its continued application in modern phytopharmacological contexts.[10]

Clinical Use

Treatment of Rheumatoid Arthritis (Amavata)

Various studies have established the effectiveness of Vatari Guggulu in the treatment of RA. Khagram et al. (2010) noted excellent relief of symptoms of Amavata (rheumatoid arthritis) when using Vatari Guggulu either standalone or when concomitantly used with Matra Basti. Patients receiving the combined therapy of Vatari Guggulu with Matra Basti showed superior clinical improvement, suggesting a synergistic effect of oral and local treatment modalities. The formulation effectively reduced pain and swelling, improved joint mobility, and enhanced overall quality of life without producing adverse effects.[11]

Thuguta et al. (2018) and Sahu et al. (2024) exhibited comprehensive improvement in the DAS-28 score and HAQ-DI, as well as parameters of quality of life, on incorporating Vatari Guggulu along with adjuvant Ayurvedic modalities. Administration of Vatari Guggulu resulted in significant reductions in DAS-28 scores, reflecting decreased disease activity, and improved HAQ-DI scores, indicating enhanced functional ability. Patients also reported improvements in pain, stiffness, joint swelling, and fatigue, which collectively contributed to better overall quality of life. These findings collectively support the integration of Vatari Guggulu into both standalone and adjunctive therapeutic regimens for rheumatoid arthritis, validating its classical Ayurvedic applications in managing Amavata.[12]

Maragalawaththa and Goyal (2019) compared Vatari Guggulu with Seetarama Vati and concluded that both are effective, with Seetarama Vati exhibiting a marginally better clinical parameter profile in osteoarthritis of the Sandhivata (knee).[13]

Mangal et al. (2017) found Vatari Guggulu with Maharasnadi Kwatha and Narayana Taila was found to be highly effective in reducing VAS and WOMAC scores in OA knee patients by a significant margin. [14] Sharma et al. (2018) also supported these findings by including Vatari Guggulu as part of a more systematic Panchakarma protocol. [15] In an open-label, single-arm, multi-centre clinical trial study, a combination of Vatari Guggul, Hingvashtaka Churna, and Brihat Saindhavadya Taila was found to be significantly effective in reducing the symptoms of arthritis. [16] Powar V et al. conducted an open-label single-arm clinical trial that tested the significance of a combination of Vatari Guggulu and Mahaushadhi Kwatha in rheumatoid arthritis. The results were significant with respect to reduction in clinical symptoms such as Sandhi Shula (joint pain), Sandhi Graha (joint stiffness), Sandhi Shotha (joint swelling), fever, and loss of appetite. [17] In another clinical study it was found that a combination of Vatari Guggulu and Brihat Simhanada Guggulu significantly reduced the clinical symptoms of Amavata. [18]

Sciatica (Gridhrasi)

Sathavane et al. (2015) showed that Vatari Guggulu was effective in relieving symptoms of sciatica, especially in cases of Vata-Kaphaja patients. Patients with a Vata-Kaphaja constitution exhibited the most pronounced symptomatic relief, suggesting that the formulation is particularly effective in Vata-Kapha predominant conditions, which are commonly implicated in sciatica according to Ayurvedic principles. The treatment was well-tolerated with no reported adverse effects, reinforcing its safety for clinical use. [19,20]

Discussion

The cumulative information indicates that Vatari Guggulu, in addition to symptomatic relief, also deals with the basic inflammatory pathology underlying RA and OA. The safety profile exhibited through acute and chronic toxicity studies renders it suitable for long-term clinical use. Also, the bio-active marker standardization increases its therapeutic dependability.

Conclusion

Vatari Guggulu, with its multi-faceted pharmacological effects, is a safe and effective Ayurvedic drug for musculoskeletal diseases,

Especially RA and OA. Yet, future randomized controlled trials with increased sample sizes and mechanistic research are necessary for its inclusion in evidence-based integrative medicine.

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