



Review Article

Suranjan-A potent antiarthritic drug of unani medicine for geriatric population

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ABSTRACT

Osteoarthritis is the most common form of arthritis among older adults. It is also one of the most common causes of physical disability among adults. Osteoarthritis (OA) is a long-term chronic disease characterized by the deterioration of the cartilage in joints which results in bones rubbing together and creating stiffness, pain, and impaired movement. The pharmacotherapy can be associated with serious side effects and high costs. Now a day's herbal medications have shown the potential for safe and effective management of arthritis and Unani medicine can provide an alternate therapy for Osteoarthritis. Suranjan Shireen-out of several herbal drugs in Unani Medicine is a potent and safe antiarthritic drug this has been proved in many in-vivo and in-vitro studies. Suranjan Shireen is effective against Arthralgia, Rheumatoid Arthritis and Gout. I have summarised the various clinical studies in this article to prove the therapeutic potentials of the Suranjan-shireen and Talkh with its Unani aspect to help the future scientist to explore this drug through clinical trial for treatment of various forms of OA specially in growing old age population.

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1. Introduction

Suranjan-an herbal medicine is a potent anti arthritic drug with a history of thousands years of medicinal use in Unani Medicine. Prominent Unani Physicians like Buqrat (Hippocrates) and Deesqaridoos (Descoroids-1st Century AD) have mentioned this in classical Unani literature including De Materia Medica. Unani physicians have prescribed it in various inflammatory joint conditions like gout, arthralgia, and backache. It is also claimed to be used as carminative, laxative, and aphrodisiac. The plant is used widely by the Unani Physicians as a single drug and in compound formulations.¹

The plant was first time found to be growing in Colchis located at the coast of the black sea centred in the present day Georgia, hence the name 'colchicum' was given to the plant. As the plant blooms in autumn, it was given the name

of autumnale. The flowers are very similar to saffron and have beautiful lilac or pale colour, so its common name is Meadow Saffron.²

Osteoarthritis is the most common form of arthritis among older adults. It is also one of the most common causes of physical disability among adults.

NSAIDs are the drug of choice for symptomatic relief of the pain but these are associated with hypertension, fluid retention, and renal compromise. They are also associated with an increased risk of gastric ulcers and bleeding, particularly in patients with a history of gastrointestinal disease, those on concomitant steroids or anticoagulants, and those older than 65 years.³

Now a day's herbal medications have shown the potential for safe and effective management of arthritis and Unani medicine can provide an alternate therapy for Osteoarthritis. Suranjan Shireen-out of several herbal drugs in Unani Medicine is a safe and potent antiarthritic drug. This has been proved in many in-vivo and in-vitro studies.

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Colchicum luteum

Fig. 1: *Colchicum luteum* (Source: <https://vikaspedia.in/agriculture/crop-production/package-of-practices/medicinal-and-aromatic-plants/colchicum-luteum>)

It has been proved that Suranjan Shireen is effective against Arthralgia, Rheumatoid Arthritis and Gout. An attempt has been made to highlight the Unani aspect of the Suranjan with recent clinical researches carried out on various types of Osteoarthritis with Suranjan and its various Compound formulations.

This article will help the future scientist to explore this drug through 3rd phase clinical trials on various formulations and dosage forms of Suranjan for treatment of various forms of OA specially in growing old age population.

2. Vernaculars

It is known as Falheeqan, Aqeemaroon, Balboosa, Falheeq, Asmaroon, Qabaroon in Unani while in Arabic, it called as Ukba, Laeba barbararia Qalb-ul-arz Suranjan hulo. In Persian it is called as Haqeer, Surangan, Suranjan shireen while in Hindi it is called as Barbari, Jangli Singara and in English it is known as *Colchicum*, Meadow Saffron.⁴⁻⁶

1. *Part Used:* Corm⁴
2. *Temperament (Mizaj):* Hot³ & Dry^{2,4}
3. *Pharmacological Actions:* Mus-hil-c-Balgham (Purgative of phlegm), Mudir-e-Baul (Diuretic), Mohallil-e-Warm (Anti-inflammatory), Mufatteh-e-Sudad (deobstruent) Musakkin (analgesic), Muqawwi-e-bah (aphrodisiac), Mudammil-e-qurooh (Healing agent of the wounds), Dafe ta'affun (antiseptic), Jali (Detergent), Kasire Riyah (Carminative), Mullaiyen (Laxative), Muqee (Emetic), Jazib-e-ratoobat (Desiccant)^{1,2,4-8}
4. *Therapeutic Uses:* Waj-ul-Mafasil (Arthralgia), Niqras (Gout, Irqunnisan (Sciatica), Zauf-e-bah (Sexual weakness), Bawaseer (Hemorrhoids),

Waja-ul-Qutn (Lumbago), Laqwa (Facial palsy), Amraz-e-Kabid (disease of liver)^{1,2,4-8}

5. *Therapeutic Dosage (Miqdar-e-Khurak) :* 2.25-3 gms^{3,4,9} gms⁹
6. *Adverse Effects:* Injurious to stomach and liver, Tenesmus, Loss of appetite.^{4,5}
7. *Corrective (Musleh):* Kateera (*Astragalus gummifer*), Qand Safaid (Granular sugar); and Zafran (*Crocus sativus* Linn.), Sonth (*Zingiber officinale*), Filfil siyah (*Piper nigrum* Linn), Amla Murabba (*Embolia officinalis* Gaertn)⁴⁻⁶
8. *Compound Formulations:* Sufoof-e-Suranjan, Habbe Suranjan, Majoon Suranjan, Raughan-e-Suranjan^{10,11}
9. *Chemical Constituents:* The active principle is an alkaline substance of a very poisonous nature called Colchicine. Besides colchicine, demecolcine and other alkaloids are present. They also contain resin, called colchicoresin, fixed oil, glucose and starch.¹² Recently allocolchicine was identified and now its analogues have been synthesised and found to be having anti mitotic activity on cancer cells.¹³

3. Recent Researches

Unani Physicians has described two varieties of Suranjan-Suranjan Talkh and Suranjan Shirin for the treatment of *Wajaul Mafasil*. Talkh variety has been advised for local use only due to its toxicity on its systemic use.⁴ In a recent research two Unani drugs i.e. Suranjan Shirin (*C. autumnale*) and Suranjan Talkh (*C. luteum*) have been identified by HPLC profiling. Suranjan Talkh contains high Colchicine contents (0.66%) in comparison to Suranjan Shirin (0.33%). So the therapeutic use of Suranjan Shirin by Unani Physicians for OA is justified.¹⁴ Suranjan Talkh is used as Raughan Suranjan for local application on the affected joints.

Antiarthritic activity of *Colchicum luteum* hydroalcoholic extract (CLHE) in formaldehyde and complete Freund's adjuvant (CFA) induced arthritis in animal. The result shows that CLHE have antiarthritic activity and it is due to its modulatory effect on the expression of pro inflammatory cytokine in the synovium.¹⁵

In a comparative randomized placebo-controlled study, 100 patients of RA were allocated to two groups. Patients in Group A received Sufoof Suranjan (*C. luteum*) 2 g and placebo in Group B BD. In Group A, CRP became negative, and the titers of the Rh factor reduced to a lower level after 3 months of treatment with a statistically significant effect on signs and symptoms of RA.¹⁶

In a standard controlled, comparative study to evaluate the efficacy of Arthritin-a polyherbal formulation of Unani drugs on Rheumatoid arthritis, 100 patients was allocated randomly to two groups. After six months of treatment with Test drug (Arthritin) containing *C. autumnale* with other six Unani single drugs three times a day; there was statistically

significant effect on RA at $p < 0.05$ in comparison to the control group (Methotrexate).¹⁷

The result of an animal study shows that the antiarthritic efficacy of MS was comparable to aspirin in formaldehyde-induced arthritis and was superior to aspirin in turpentine oil-induced paw edema and CFA-induced arthritis.¹⁸

The results of another animal study show that MS at therapeutic doses is relatively safe and effective in decreasing the biomarkers of RA.¹⁹

It has been concluded after an animal study; that Habbe Suranjan is safe in human body.²⁰ In a recent clinical study of Habbe Suranjan and Raughan Suranjan on Arthralgia; there.

Was a statistically significant effect on symptoms of pain and the drug was safe.²¹

In a case-control, multicentric, randomized prospective, 2-arm parallel-group clinical trial, the results showed that Urinile has the potential to decrease serum Uric acid levels in gouty arthritis probably because of its antioxidant potential and xanthine oxidase inhibitory activity. Polyherbal formulation Urinile is composed of *Berberis vulgaris*, Ajwain (*Trachyspermum ammi*), Suranjan Shirin and Karafs (*Apium graveolens*).²²

In a standard controlled, comparative study to evaluate the efficacy of Polyherbal Unani formulation on hyperuricemia, 100 patients were allocated randomly to two groups. The efficacy of the test treated medication (Gouticin) was superior at $p < 0.05$. Gouticin is more effective than the Allopurinol in the treatment of hyperuricemia.²³

4. Conclusion

Osteoarthritis is a slowly progressing chronic disease of joints of extremities hence it can be classified as Wajaul Mafasil Balghami/Saudawi according to Unani medicine philosophy. This type of disease is treated with hot temperament drugs which are Mohallile Auram (Anti-inflammatory) and Musakkin Auja (Analgesic) in their pharmacological action.²³

Suranjan Shireen is a drug with Hot and Dry temperament having anti-inflammatory and analgesic activity hence it is effective in the treatment of Osteoarthritis. From the above researches it may be concluded that Suranjan Shireen is an effective drug for various types of Arthralgia. Majoon Suranjan is effective in RA. Habb-e-Suranjan is effective on Arthralgia. Suranjan as a single drug and compound formulation is effective against gout by reducing Serum Uric Acid level and its effect is superior to Allopurinol.

This article will help the future scientist to explore this drug through 3rd phase clinical trials on various formulations and dosage forms of Suranjan for the treatment of various forms of OA specially in growing old age population.

5. Source of Funding

None.

6. Conflict of Interest

None.

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