

Joint pain relieving herbal “churna” the ultimate solution of joint pain

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Proceeding

Introduction - Arthritis

1. Most common and depriving disease of the musculo-skeletal system.
2. Osteoarthritis, rheumatoid arthritis and gouty arthritis are the joint pain types that are universal pathetic joint afflictions.

A. Signs & Symptoms

- a. Tenderness and enlargement of the joint with limitation of its movements.
- b. Pain increases on movement and decreases with rest.
- c. Joint stiffness and wasting of the muscles.
- d. Pain increase with change in the weather.
- e. Pain and inflammation in multiple joints, with pain, stiffness and symmetrical swelling of the peripheral joints.
- f. The small joints of the fingers and toes are initially affected.
- g. Morning stiffness is often experienced.
- h. Skin may develop subcutaneous fibrous nodules.
- i. Anorexia, weakness, loss of weight and characteristic deformities of the joints as the disease progresses.

Introduction (Cont.)

- A. Osteoarthritis is degenerative in nature, become worse over time.
- B. Medications, exercise and physiotherapy provide temporary relief from pain and help in joint movement, no permanent solution except joint surgery, which is extremely expensive.
- C. Over the period of time, joint stiffness and pain may worsen, making daily activities difficult. In some people, ability to work may be finished forever.
- D. Several natural herbs that help treat pain and stiffness without creating any side-effects.
- E. Effective herbal supplements based on age-old science of Ayurveda are available to fight the symptoms of Osteoarthritis and other joint pain and get long term relief.

Ayurveda view of Arthritis

- I. Osteo-arthritis called as Sandhigat vaata.
- II. Rheumatoid arthritis known by Aama Vatta.
- III. Joint pain develops mainly due to accumulated toxic matter results in imbalance of the three doshas.

IV. Weakness of the gastric fire or the Agni → undigested food → undigested juice (Aam rasa) intermingles with the vitiated humors Vatta, pitta and kapha.

V. Results in causing pain and inflammation in the joints and thus production of the disease.

Aim

To find the effectiveness of the “Churna” as an alternative treatment to any invasion in joints for the Pain relief of Osteoarthritis /Rheumatoid arthritis and / or any kind of Joint Pain.

Methodology

- a. 889 patients of Osteoarthritis, Rheumatoid Arthritis, Ankylosing Spodylosis, Chronic Spodylitis & Frozen Shoulder of age group between 29 to 94 years were given 10 gms sachets of the “Churna” for 12-15 month period.
- b. Dosage: 1 sachet in the morning & 1 sachet in the evening dissolved in water after food.
- c. Side effects: Minimal and mild in form of nausea & constipation, Diarrhea, impaired taste.
- d. Avoidance: Patient must avoid consumption of Curd, Lime, Tomato, Pickles etc.

Contents of the “Churna”

- I. Guggul (Commiphora Mukul)
- II. Punarnava (Boerhavia Diffusa)
- III. Shunti (Zingiber Officinale)
- IV. Methi (Trigonella Foenumgraecum)
- V. Ashwagandha (Withania Somnifera)
- VI. Kali Mirch (Black pepper)

VII. Devdaru (Cedrus Deodar)

VIII. Ajwain (Carum Copticum)

IX. Pipali (Piper longum)

I. Guggul (Commephora Mukul)

- i. Guggul's active chemical compounds gugulipid and guggulsterone → *2 powerful antioxidants that fight inflammation and stimulate your immune system's white blood cells.*
- ii. Southern California University of Health Sciences researchers found that patients with knee arthritis saw measurable improvement after one month of using guggul to reduce pain, swelling and stiffness.

B. Usage of Guggulu for Arthritis

- a. Guggul is a destroyer of the aggravated Vata and Kapha doshas, both of the doshas reason for joint pain and swelling.
- b. Herb of Guggulu benefits ailments resulting from a distortion in vata or air like Arthritis, sciatica, paralysis etc.
- c. Guggul also holds anti septic properties and thus aids to relieve painful, red and inflamed joints.
- d. Natural tendency to decrease and balance the aggravated Vata, Guggul used both for external application as a paste and be taken internally so as to find relief from joint pains and muscular stiffness.

II. Punarnava (Boerhavia Diffusa)

- i. Decoction of leaves of Boerhaavia diffusa L. used in martinican folk medicine for its analgesic and anti-inflammatory properties.
- ii. Boerhaavia diffusa is an herb with anti-cancer and anti-inflammatory properties.
- iii. Antinociceptive principle of B. diffusa is present mainly in the juice of fresh leaves and has a significant antinociceptive effect when assessed in pain models.
- iv. Mechanism underlying this analgesic effect of fresh leaves of B. diffusa remains unknown, but seems to be related to interaction with the opioid system [1].
- v. The juice of fresh leaves of Boerhaavia diffusa L. markedly reduces pain in mice.
- vi. Dose for arthritis: Drink 10 ml root decoction twice a day.

III. Shunti (Zingiber officinale)

- i. Anti-inflammatory effect of ginger was scientifically proved first by Kiuchi et al. in 1982. They isolated four new different compounds from ginger and all showed potential inhibitory effect to reduce prostaglandin synthesis, which is the key to inflammation.
- ii. In another study carried out in 1992, author found that ginger showed anti-inflammatory activity by inhibiting not only prostaglandin but also leukotriene biosynthesis [2].
- iii. Study was conducted to evaluate the safety and efficacy of ginger in management of OA.
- iv. Sixty patients of OA of knee enrolled in randomized open label study and divided into three groups of 20 each.

v. Group I received tab. Diclofenac 50 mg and cap. placebo, group II received cap. ginger 750 mg and cap. placebo and group III received cap. ginger 750 mg and tab. diclofenac 50 mg.

- vi. Analysis of WOMAC score and VAS score in all the three groups showed statistically significant improvement with time in all groups. On comparison among three groups, group III patients who received both ginger and diclofenac showed numerically superior improvement than the individual treatments. There was no statistically significant difference among three groups in case of adverse events.
- vii. Ginger powder has add-on effect on reducing the symptoms of OA of knee with acceptable safety profile [3].
- viii. Ability of a well-characterized crude ginger extract to inhibit joint swelling in an animal model of rheumatoid arthritis, streptococcal cell wall-induced arthritis, was compared to that of a fraction containing only gingerols and their derivatives.
- ix. Both extracts were efficacious in preventing joint inflammation. However, the crude dichloromethane extract, which also contained essential oils and more polar compounds, was more efficacious in preventing both joint inflammation and destruction.
- x. In conclusion, these data document a very significant joint-protective effect of ginger and suggest that nongingerol components are bioactive and can enhance the antiarthritic effects of the more widely studied gingerols.

xii. University of Miami study concluded that ginger extract could one day be a substitute tononsteroidal anti-inflammatory drugs (NSAIDs). Study compared the effects of a highly concentrated ginger extract to placebo in 247 patients with osteoarthritis (OA) of the knee. The ginger reduced pain and stiffness in knee joints by 40 percent over the placebo.

xiii. "Research shows that ginger affects certain inflammatory processes at a cellular level," says the study's lead author, Roy Altman, MD, now at the University of California, Los Angeles.

xiv. "Ginger has anti-inflammatory, anti-ulcer and antioxidant activities, as well as a small amount of analgesic property," says Roberta Lee, MD, vice chair of the Department of Integrative Medicine at Beth Israel Medical Center in New York City.

IV. Methi (Trigonella foenumgraecum)

- i. Osteoarthritis is a result of trauma to the joint, infection, age or immunity-related disorders.
- ii. All are considered autoimmune diseases, where the body's immune cells destroy its own tissues because of the breakdown of cartilage that normally protects the joints.
- iii. Fenugreek has been shown to stall auto-immune disorders by acting as a mimic of estrogen, which is known to inhibit this condition.
- iv. Fenugreek has been investigated as a possible estrogen replacement in the treatment of arthritis [4]. Results obtained in this study suggest that anti-inflammatory and antioxidant activities of T. foenum graecum may be the possible reason behind the observed anti-arthritic activity.
- v. T. foenum graecum 400-mg/kg dose showed more prominent results compared to the 200-mg/kg dose of T. foenum graecum.

V. Ashwagandha (*Withania Somnifera*)

- i. Ashwagandha is a powerful anti arthritic and anti-inflammatory agent.
- ii. Anti-inflammatory activity has been attributed to biologically active steroids, of which Withaferin A is a major component.
- iii. In animal studies ashwagandha has been found to be more potent than hydrocortisone, reducing swelling and degenerative bone changes more than the steroid.
- iv. In a clinical trial involving 77 RA patients who were given 3 grams of ashwagandha orally three times a day with milk, over 75% experienced moderate to good improvement of symptoms.
- v. When combined with frankincense, turmeric, and a zinc complex, ashwagandha helped to significantly reduced pain and disability for patients with osteoarthritis compared to the untreated control group in a randomized clinical trial.

VI. Kali Mirch (Black pepper)

- i. Active component in hot peppers that gives them their heat is called capsaicin, and the hotter the pepper, the higher the level of capsaicin.
- ii. Capsaicin depletes a neurotransmitter called substance P, which is responsible for sending pain signals to our brain. If we block the big P, we never get the memo that something is hurting, and therefore end up pain free.
- iii. Piperine in black pepper can trigger TRPV1 (transient receptor potential vanilloid type-1) in the body. This triggering can reduce pain.⁵
- iv. Piperine administrated orally to rats at 20 and 100 mg/kg/day for 8 days. Piperine inhibited the expression of IL6 and MMP13 and reduced the production of PGE2 in a dose dependant manner at concentrations of 10 to 100 µg/ml. In particular, the production of PGE2 was significantly inhibited even at 10 µg/ml of piperine
- v. Conclusion: Piperine has anti-inflammatory, antinociceptive, and antiarthritic effects in an arthritis animal model. Piperine should be further studied with regard to use either as a pharmaceutical or as a dietary supplement for the treatment of arthritis.

VII. Devdaru (*Cedrus Deodara*)

- i. Wood of *Cedrus deodara* has been used since ancient days in Ayurvedic medical practice for the treatment of inflammations and rheumatoid arthritis.
- ii. The main constituents present are alkaloids, flavonoids, glycosides, phenolic compounds, saponins and proteins.
- iii. The anti-inflammatory activity of *C. deodara* wood attributed to its mast cell stabilizing activity and the inhibition of leukotriene synthesis.
- iv. *Cedrus deodara* effectively inhibited the polyarthritis phase as measured by the paw swellings on the injected limbs on complete adjuvant induced arthritis in rats.

VIII. Ajwain (*Carum Copticum*)

- i. Due to the presence of anti-inflammatory compounds, ajwain acts an excellent natural aid to get rid of pain due to arthritis and is effective in delivering muscle relaxation.
- ii. It contains anaesthetic properties that help in soothing pain and swelling, seen in people suffering from arthritis.

- iii. Carom seeds contain antibiotic compounds that help in combating inflammation and other associated symptoms, such as redness.

Ingredients of the "Churna"

No. Herb used	Latin name	Quantity
1 Shunti	Zingeber Officinale	3.6 gms
2 Punarnava	Boerhavia diffusa	2.7 gms
3 Pipali	Pipur Longum	2.9 gms
4 Ajwain	Carum copticum	2.5 gms
5 Devdaru	Cedrus Deodar	3.2 gms
6 Guggalu	Commiphora Mukul	2.7 gms
7 Methi	Trigonella Foenumgraecum	2.7 gms
8 Ashwagandha	Withania Somnifera	2.4 gms
9 Kali Mirch	Black Papper	3.2 gms

Mechanism of Action of "Churna"

- a. 9 natural phytonutrients exerting synergistic activities on body.
- b. Reduces inflammation and pain by inhibiting prostaglandin synthesis, suppressing cyclooxygenase-1, cyclooxygenase 2, 5-lipoxygenase and cytokines and neutralizing leukocyte elastase and free radicals by inhibiting lipid peroxidation and raising levels of Vitamin C.
- c. This "Churna" promotes healing of joints by stimulating peripheral and collateral circulation, inhibiting platelets aggregation, reducing synovial fluid leucocyte count and lowering elevated serum transaminase levels and erythrocyte sedimentation rates, and supplying lysine to help maintain nitrogen balance in body.

Result - overall effect of the therapy

Effects	No. of patients	percentage (%)
Complete remission	702	0.7896
Major improvement	176	0.1979
Minor improvement	7	0.0078
No improvement	4	0.0044

Side effects

Side effects	No. of patients
Nausea	118
Impaired Taste	372
Constipation	167
Diarrhea	17

Conclusion

- a. For painful joint treatments, Ozone treatment, LAHC injections, Prolotherapy requires invasion of joint, and long term NSAID use has known systemic side effects.
- b. Here, simple oral intake of the "Churna" to relieve joint pain without any kind of joint invasion or visible systemic side effects was achieved successfully in 878 out of 889 patients proving its effectiveness.

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Conflicts of interest

The authors declare there is no conflict of interests.

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