

Efficacy and Adverse Effects of *Gunja beej lepa*- A case series

Nilima Wadnerwar, K.S.R. Prasad



Abstract:

Today's modern life style and changed dietary habits among the people has led them to suffer from number of joint diseases which even hamper their routine activities. In Ayurveda, various toxic herbal drugs are mentioned to have medicinal properties in number of diseases when they are utilized wisely in proper dose and sufficient care. *Gunja* (*Abrus precatorius*), one of the poisonous plants which is very beneficial as anti-inflammatory, anti-microbial, anti-fertility, anti-tumor etc. Paste of *Gunja* seeds can be used as rubraficient in Sciatica, stiff shoulders, paralysis and other nervous and arthritic conditions. Hence a clinical study "Role of *Gunja Beej Lepa* on inflammatory conditions of arthritis" was conducted to provide a potent and efficient drug to manage the acute local inflammatory condition. Thus leading to recognition of anti-inflammatory drug used for the purpose of practice. The result of this study was significant. During the course of the study, some patients showed beneficial results along with some adverse effects such as rash, itching, redness etc. Relief observed in symptoms such as pain and swelling was considerable and the untoward effects were minimal and manageable. So the toxic drugs like *Gunja* can be used wisely with precautions.

Key: *Gunja beej*, anti-inflammatory, arthritic conditions.

Introduction:

The excellence of Ayurvedic pharmacology is glorified with the use of toxic metals/minerals and herbal drugs for preparation of medicines. Poisons are harmful and dangerous for life but they are highly potent, readily get absorbed in blood stream, able to act on subtle parts of body and hence can be cautiously utilized at very low dose level. Ayurveda has mentioned therapeutic uses of poisonous drugs after specific *shodhana* (purification) procedure which helps in reducing toxic constitute and make them better for internal administration. It is stated that strong poisons can prove best medicine when used properly in correct therapeutics dose and with proper combination. On the other hand a good medicine may create sever adverse effects if not used properly [1]. Ayurveda has utilized many toxic drugs sometime as single remedy and mostly in combination with other drugs to increase the efficacy and potency of other ingredients.

Altered dietary habits and sedentary life style have led people to suffer from various life style disorders which includes painful and inflammatory diseases of joints. Inflammatory conditions of joints result in difficulty in movements and hence patients expect urgent relief. This can be

Joinsysmed ID: JID046CR141121

Submitted Date: 21-11-2014

Approved Date: 20-07-2015

Corresponding Author:

Nilima Wadnerwar, Asst. Professor,
Dept. of Agadtantra, Mahatma
Gandhi Ayurved College, Hospital &
Research Center, Salod(H), Wardha.

Email:

dr.nilima_wadnerwar@rediffmail.com

Co-author (s):

K.S.R. Prasad, Professor,
Department of Panchakarma,

Conflict of Interest: NIL

Source of Support: NA

Ethical Clearance: NA

Registered to: NA

Acknowledgment: NIL

How to cite the article:

Nilima Wadnerwar et.al., Efficacy
and Adverse Effects of *Gunja beej
lepa*- A case series, Joinsysmed vol
3(2), pp 103-106

done with the help of highly potent drugs which will cure the symptoms quickly. There are several Ayurvedic herbal and mineral preparations claimed to have high efficacy in inflammatory conditions. Such formulation includes some toxic drugs either as mono-drug or as multidrug combination. Purifies toxic herbal or metallic/mineral drugs are mixed to increase the potency and absorption of the drug as toxic drugs are get absorbed from gastrointestinal tract without passing through first pass metabolism.

Gunja (Abrus precatorius), a *Vanaspathic Visha* (toxic herb) is described and classified as *Upavisha* (mild poisons) [2,3]. Both red and white types of *Gunja* are beneficial in hairs loss, cures diseases of vitiated *Vata* and *Pitta*, fever, dryness of mouth, giddiness, difficulty in breathing, thirst, diseases of eyes, improve sex vigor, body strength, useful in pruritus, ulcer, infection of worms and similar parasites, alopecia and many skin diseases [4]. Other uses of *Gunja* include treatment of atrophied ear lobule, dandruff, sciatica, erysepalous and few other dermatoses, blindness, diseases of head, dental caries, etc [5].

There are many potent and quick reacting remedies prepared from toxic herbs but their use in general practice is limited due to the risk of adverse effects and lack of necessary information regarding precautions while using toxic drugs and management of adverse effect if occurred. Unwanted effects of poisonous drugs can be prevented by proper purification of the drug and by following few precautions during use. This study aims at the use of *Gunja beej lepa* as representative of toxic herbal drugs in the management of inflammatory joint disease. Finding of this work suggest some precautions which are helpful to avoid the untoward effects of *Gunja beej lepa* and similar effects appeared from the use of other poisonous drugs.

Material and Methods:

Source of data: Patients suffering from transient mono or bi-arthropathies are randomly selected from O.P.D.

Trial drug: *Gunja (Abrus precatorius)* in the form of paste.

Part used: *Rakta Beej* (red variety of *Gunja* seed)

Method of Preparation: *Gunja* seeds were collected and authenticated by pharmacognostic study in Dravyaguna department. Physical impurities were

separated well before powdering the seed. Freshly grinded paste of *Gunja beej churna* made with water was used for local application at inflamed part.

Posology: *Ardhanguli* (Approx.10 mm to 1cm thick) or sufficient quantity of *Gunja beej kalka* according to the affected area.

Duration of application of Lepa: Till drying i.e. approximately 10-15min. [6]. Paste of *Gunja* seeds was applied till the relief in pain and swelling or upto 7 days. Withdrawal of the drug was done after 7 days of treatment.

Follow up: Follow up was advised after 3, 5 and 7 days.

Case Series:

Case no. 1: 20 years male patient was came for treatment of pain and burning sensation in back along the left side of vertebral column which was radiating to left lumber region and persistent since 1 ½ yrs. Burning sensation was increased since 6 days. On examination, swelling was observed over the left side of T1-T3 vertebrae (44cm x 6cm area). CBC, KFT, USG abdomen and MRI were normal. After conducting sensitivity test, patient was advised for local application of *Gunja beej lepa*. On first day, 60% of pain and burning sensation was relieved. On second day, patient developed pink colored rash at the area where *Gunja beej lepa* was applied (Fig.1). However the rash was without pain and itching. Considering appearance of rash as adverse effects of *Gunja beej lepa*, application of *lepa* was discontinued and patient was advised to apply coconut oil. Rash disappeared itself within next two days. Local application of *Gunja beej lepa* was started again from fourth day and 98% relief in pain and burning sensation was observed within next two days.



Fig. 1: Rash over abdomen



Fig. 2: Rash at lumber region

Case no. 2:

37 years female patient was suffering from degenerative changes in the spinal cord along with bulging of spinal cord at 3rd & 4th lumbar vertebrae. Patient was having recurrent continuous type of pain in the lumber region. On the first day, *Gunja beej lepa* was applied for 15 minutes. *Lepa* started stretching sensation along the nerve route and patient was feeling better. Patient had chronic pain at cervical region too, hence on second day; patient was willing to apply *lepa* on cervical region too as patient felt significant relief in lumbar pain. *Lepa* was applied along the spinal cord from cervical to lumbar vertebrae. Patient insisted to maintain the *lepa* for half an hour as she was feeling better with the effect of *lepa*. At evening, mild itching started at back side of patient where *lepa* was applied (Fig 2). Local application of coconut oil was advised. On the third day, application of *lepa* was continued as patient had acute pain. After 2 hours of *lepa* application skin went reddish colour with rash and severe itching for which *Choulai lepa* was applied. From 4th day, *lepa* was discontinued and *Choulai lepa* was continued for next two days.

Case no. 3:

A 28 years male patient came for the treatment of radiating pain from left lumbar vertebrae to right foot and tingling sensation since four months. It was diagnosed as *Gridhrasi* (sciatica) and patient had already taken some allopathic and Ayurvedic medicines. Still he was not able to walk. After discontinuation of all the medicines for one month, he

was admitted in the hospital for application of *Gunja beej lepa*. Hematological and biochemical investigations of this case were found normal. Lumber, acetabular, knee and ankle joints were tender and swelling was observed on knee and ankle joints. The disease activity score (DAS) was 3.53. *Gunja beej lepa* was applied on the lumber and gluteal region for 7 days. After due course DAS was 2.45 and patient felt good relief in pain and tingling sensation. Patient was able to walk within 7 days from starting of *Gunja beej lepa* application.

Case no. 4:

A 38 years male patient was suffering from pain at lumber region. Patient had gone to local physician and had taken painkiller intramuscular injection in left buttock. Within 24 hrs patient had severe pain in both lower limbs, swelling and tingling numbness. He was unable to stand and walk. There was pain in the muscles from gluteal to thigh region. Calf muscle was flaccid. Patient had lost the muscle tone in that leg. Planter and knee reflexes were absent. Patient consulted in the medical hospital and was diagnosed as Injection Induced Neuroparalysis. When patient was admitted in the Ayurved college hospital, it was decided to treat this case by local application of *Gunja beej lepa*. *Lepa* was applied from lumber region upto the calf muscle. No improvement in symptoms was observed in first four days, but from fifth day patient was able to move little finger of affected leg. On the sixth day planter reflexes were seen positive.

Precautions to be taken during the use of toxic drugs:

Though the toxic drugs have untoward effects, they should be used in therapy with certain precautions such as toxic drug should be used in proper therapeutic dose for appropriate duration and under the supervision of the physician, *Shodhan* should be done for both internal and external use to avoid untoward effects and sensitivity test must be carried out before external use.

Discussion:

Gunja a toxic herb, is included under "*Upavisha*" category as [7]. In various Ayurvedic texts, *Rasatarangini* has specifically mentioned toxic symptoms produced by consumption of crude drug. Its pharmacological properties act as a *Visha* and vitiates *Kapha* and *Pitta dosha*, causes vomiting, diarrhea and

local irritation. *Gunja* was accepted as a mono-drug therapy for various diseased conditions and also utilized as ingredient in different formulations e.g. *Gunjabhadra Rasa*. It is advisable to use *Gunja beej* only after following proper *Shodhana* procedure which not only purifies the drug but also minimizes its untoward effects [8].

Gunjalepa, a folklore remedy is, a species of leguminosae family. By the various complex analytical procedures carried out worldwide, it is reported to contain number of active ingredients with predominant toxicity of seeds by virtue of an albuminoid substance "Abrin"[9]. Though *Gunja beej* is an irritant poison [10], it is used in many conditions such as rubraficient in Sciatica, stiff shoulders, paralysis and other nervous and arthritic conditions [11]. *Visha* have ten properties out of them *Sukshma* (ability to enter in subtle cellular parts) & *Vyavayi* (increase the permeability of every body tissue) property is basically responsible for affecting all three *Dosha* & seven *Dhatu* & three *Malas* [12]. By *Apaki* property (get absorbed without first pass metabolism), it need not to undergo digestion before absorption [13]. These properties are very helpful in therapy for immediate response. So it was decided to use *Gunja beej lepa* in inflammatory conditions of arthritis. By observing the significant results of *Gunja beej kalka* on inflammatory conditions of arthritis in the series of cases, it was recommended to use in arthritis. *Gunja* is even indicated in *Ghridhrasi* (Sciatica) and *Pakshaghat* (Paralysis) [14] but the response was quick in the third and fourth cases.

Conclusion:

As it is an irritant poison, it can produce some rash and itching on application such as in first case which may be self limiting. In the second case the rash appeared because the *lepa* was applied for more than the prescribed time i.e. 15 minutes. It should be applied only on the affected area for 15 minutes.

Toxic herbal drugs such as *Gunja*, have good and effective medicinal properties. But they should be used in accurate prescribed dose for appropriate period under the supervision of physician along with enough precautions so as to avoid the adverse effects.

References:

[1] Mishra S. commentary by Harishchandra Sinha

Khushwah, Charak Samhita, Chikitsasthan 23/24, Chokhamba Orientalia, Varanasi, Reprint 2012, p. 580.

[2] Sharma GM. Ayurved Prakash, Chapter 6/108, Varanasi: Choukhamba Bharti Academy, Reprint 2007; p. 500.

[3] Shastri K. Sadanand Sharma (editor) Rasatarangini. Delhi: Motilal Banarasidas Publication; 1979, 24/163-164, p.702

[4] Pandey G. Chunekar Krushnachari, Bhavprakash Nighantu, Purvardha/ 124-128, Chokhamba Orientalia, Varanasi, 2nd Ed, 1998, p. 354-355

[5] Sharma P. Kaidev Nighantu, Aushadhi varga/795-796, Chokhamba Orientalia, Varanasi, p.148.

[6] Murthy S. Sharangdhar Samhita, Uttarakhanda chapter 11/2, Chokhamba Orientalia, Varanasi, Edition, 2007, p.236.

[7] Shastri K, Sanghagupta Sanushri, Sadanand Sharma (editor) Rasatarangini. Delhi: Motilal Banarasidas Publication; 1979, 24/163-164, pg.702.

[8] Sharma GM. Ayurved Prakash, Choukhamba Bharti Academy, Varanasi, reprint 2007; 6/47, p. 497.

[9] Modi's Medical Jurisprudence and Toxicology, edited by Mathiharan K & Patnaik Amrit, Chapter 5, Lexis Nexis Butterworths Wadhwa, Nagpur, 23rd edition, p.223.

[10] Modi's Medical Jurisprudence and Toxicology, edited by Mathiharan K & Patnaik Amrit, Chapter 5, Lexis Nexis Butterworths Wadhwa, Nagpur, 23rd edition, p.223.

[11] Dwivedi V. Raj Nighantu with commentary by Indradev Tripathi, Chokhamba Orientalia Varanasi, Reprint 1982.p.52.

[12] Sharma P V, Charaka Samhita, Chikitsasthana, 23/24, Chaukhambha Orientalia Varanasi, 7th edition, 2005, p.366.

[13] Sharma P V, Charaka Samhita, Chikitsasthana, 23/24, Chaukhambha Orientalia Varanasi, 7th edition, 2005, p.366.

[14] Dwivedi V. Raj Nighantu with commentary by Indradev Tripathi, Chokhamba Orientalia Varanasi, reprint 1982.p.52.