



# **Atibala (Abutilon Indicum): Proposal For Standardisation Of Dosage And Duration Of Treatment**

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## **Abstract**

Atibala [Abutilon indicum] is widely used as a drug in many diseases. However neither the dose nor the duration of treatment are authenticated. Considering vrumbhana effect of atibala, we propose an experimental study employing albino rats for attaining the dosage and duration of treatment. Once dosage and duration of treatment is known it could be useful in the treatment of other ailments also.

## **Introduction**

Atibala is a variety of bala known for balya and vrumbhana. It occupies an eminent place in Charaka – Samhita where includes combinations of 95 preparations signifying its major role in treatment.

The herb is identified as *Abutilon [Malvaceae] indicum*, G.Don. The synonyms are *A.indicum* Linn, *A.indicum* Sw.hort [1]. The plant gain height of one to two meters. It is a minutely hairy shrub, distributed commonly on tropic and sub tropic of both hemispheres.

### Macroscopic Characters:

Suffrutescent, minutely hoary tomentose. Leaves up to 9 by 5 cm. Chordate, ovate, acuminate toothed, rarely sub trilobate; petioles 3.8 – 7.5 cm. Long; stipules 9mm. Long linear, acute, deflexed. Pedicles often 2.5-5 long, auxiliary solitary joined very near the top. Calyx 12-8mm. Long, divided to the middle; lobes ovate, apiculate, corolla 2.5cm diam, yellow, opening in the evening. Staminal tube hairy at the base; filaments long. Carples usually 15-20 longer than the calyx, with a distinct small acute point, hairy, ultimately shining dark brown seeds brown, black, densely and minutely scrobiculate.

The different parts of *Abutilon* is prescribed for variety of diseases as shown in Table1.

**Table 1 Usage of different parts of *Abutilon indicum***

<u>Parts Used</u>	<u>In Diseases, Conditions</u>
Leaves	Bleeding piles[2] bronchitis(2) Catarrhal bilious diarrhea [2] Gonorrhoea [2],inflammation of the bladder[2], fever[2], mouthwash for tooth ache and tender gums[2], lumbago[2],inflammation all parts[2], demulcent[3], bleeding piles[4], diuretic[4], emollient[4], diarrhea[4], inflammation of bladder[4], wash for wound and ulcers[4], enema[vaginal infection], locally for fever and headache[4]
Bark	Fever [2], anthelmintic[2], alexeteric[2], urinary discharges[2], diuretic[2], astringent[3], diuretic[3],
Roots	Uterine hemorrhagic discharges [2] pulmonary sedative [2], fever [3], nerve tonic [4], piles [4], leucoderma[4], strangury hematoma[4], stones in bladder[4], cough[4], leprosy[4]
Seeds	Aphrodisiac[2],laxative in piles[2], cough externally smoke for thread worms[2], emollient[2], demulcent[2], aphrodisiac[3], laxative[3], demulcent[3], cough[4], gonorrhoea[4], gleet[4], chronic cystitis[4]
Whole plant	Demulcent[2], lenitive[2], diuretic laxative[2], discutient remedies[2], anthelmintic[4], anti inflammation[4], urinary and uterine discharges[4], piles and lumbago[4], nerve pain[4], significant analgesic action (in albino rats)[5]

Charaka Samhita does not teach the dosage of atibala and duration of treatment. Each physician from his experience and intelligence prescribe dose. The dosage known now are shown in Table2.

**Table 2 Dosage of Atibala as known today**

Authors	Dosage/Day
1. Vaidya [1968] [6]	10 gram
2. Mishra [1986] [7]	10- 11 gram
3. Chuneekar [1998] [8]	Root 10-12 gram Seeds 12-24 gram
4. Sharma [1998] [9]	3-6 grams

**Table 3. Proposed plan of study**

Animals*		
	CONTROL 0 -10 $\nabla$ 0+10	EXPERIMENTAL 0 -20 $\nabla$ 0+ -20
Food and water	Atilibitum	Atilibitum
Drug	Nil	From any one group [A,B,C,D,E]
Dose	Nil	25 mg per day
Duration [Days]	Matching with experimental animals	Minimum 30 Maximum 90
* Albino rats [around 250 gram]		

Group
A. Whole plant
B. Leaves
C. Bark
D. Seeds
E. Roots

### **Proposal for Standardisation**

A physician of Ayurveda who does not regularly practice atibala, get confused and looking for help of dosage and duration. This lead us to the requirement of standardization of dosage and also the duration of treatment.

We propose a plan of study to establish the dosage and duration of atibala. Atibala is commonly prescribed for balya, vrumbhana, garbha vrudhikara and garbha stapaka. Considering vrumbhana effect [vrudhikara] of atibala the study is planned. The details of the plan of study is given in table 3.

The total study is divided in to 5 groups A,B,C,D,E, with either panchaga or an individual portion of Atibala as the drug. Adults rats[250grams] are preferred as experimental animal in this study. Each group is divided in to control & experimental. Under control 10 male and 10 female rats are included. Twenty male and twenty female rats are included under experimental group. The animals are given food and water adlibitum. Daily between 7 and 8.00am the accurate weight of all animals are noted. The fixed time is to exclude the discrepancy in weight as report by chrono biologists.

The drug is panchanga [Group A] or one portion of atibala [Group B,C,D,E] in well powdered form considering the drug prescribed in an adult [60Kg] is 6 grams/day. The equivalent dose in a rat [250 gram] is 25 mg gram/day. That means a single dose is 8.33 mg m. The drug is administered directly to in mouth after mixing with water. Any animal in experimental group gain the desired weight [10gram] will be excluded from the study irrespective of the day of study. The study is continued in remaining animals till 90 days, if desired vrumhana effect is not obtained.

The result is statistically an analyzed in terms of weight gain and compared with that of control. If the result is not satisfactory, the study is repeated with an increased dose of 5 mg [total 30 mg]/day. Till the target weight is gained the study is continued employing new set of animals with progressively increasing dose of 5 mg/ day continuing a study of this kind will enable us to establish the dosage and duration of treatment of panchanga, leaves, bark, roots and seeds of atibala on vrumhana effect. Thus established same dose and duration should be acceptable for other ailments.

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