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Exploring the Diversity of Patola & Its Connection to Contemporary Species - A Drug Research

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ABSTRACT

Patola (*Trichosanthes* species) has been extensively used and applauded for its curing properties especially in skin disorders since ages in Ayurveda. Many species are identified under the genus *Trichosanthes* and are being used according to the availability & necessity throughout world. Botanically 2 major varieties are abundantly available in India, *Trichosanthes dioica Roxberg and Trichosanthes cucumerina Linnius*. Each species again bears sub species, a bitter wild variety and a sweet vegetable variety. Mostly wild varieties are used as medicines whereas the cultivated variety is used as vegetable which is of high nutritional values.

In Nighantus, number of synonyms were given to explain the habitat, habit and pharmacological properties of Patola, to facilitate it's easy identity. As most of the synonyms suit to almost all the species a great confusion is prevailing in its identity.

Most of the authors of ancient era didn't mention the morphological characters of the drug or the part to be used, in their chikitsa granthas which lead to further confusion in its usage.

To throw some light over these issues and to make it a clear choice, a keen and deeper study is done Understanding the views of the sages. Using the specific terminology for the same drug at different places needs much more deep understanding regarding its characters and properties. This work tries to follow the footsteps of great sages of Ayurveda in understanding the synonyms of Patola. By understanding the lexicons starting from Brihatrayee to latest Nighantus in Ayurvedic literature one can easily draw a conclusion in utilizing the correct species and correct part to be used according to the requirement.

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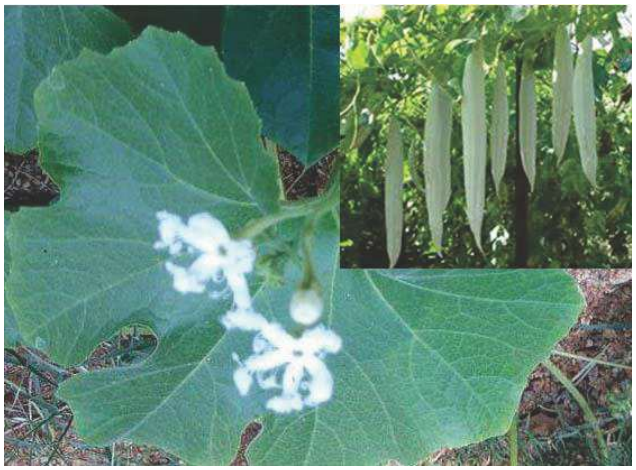
INTRODUCTION



T.anguina Linn

T.Cucumerina Linn

T.Dioica Roxb

Patola (*Trichosanthes* species), one among the pancha tikthas and a drug of choice for many Ayurvedic scholars in skin disorders, possess number of varieties and also synonyms, leading to a great confusion in its usage. Which species has to be taken when it is mentioned by different names like Patola, patoli, patolika, kulaka, rajiphala etc., is a mind dwelling question since decades. Is there any difference among the morphological characters they possess or the actions they exhibit is a great question. These questions are creating hurdles to the modern scholars and pharma companies in its usage. As few species are becoming costlier due to their rare availability and also the transportation always becoming a major factor in deciding its cost, more scope for adulteration is noticed.

The literary review from many scholarly books of Vedic and modern eras and a keen observation of their properties may help to clear the confusion and finds the alternatives to enable the drug availability at cheaper rates.

Materials & Methods

To understand the purpose of Synonyms and their vast usage in the Ayurvedic texts, many epics have been reviewed. These texts starting from Vedic era to modern era helped to get clarity over its varieties as prescribed by the Acharyas of Vedic era and to co relate them with the species available at present era.

The lexicons reviewed for the study includes Charaka Samhitha, Susrutha Samhitha, Aasthanga Sangraha, Sarangadhara Samhita, Raja Nighantu, Vrinda Madhava, Vangasena Samhitha, Dhanvanthari Nighantu, MadanaPala Nighantu, Kaiyadeva Nighantu, Bhava Prakash Nighantu, Raja Vallabha Nighantu, Sodhala Nighantu, Sankara Nighantu, Abhidana Manjari, Controvertial drugs by Bapalalji & P.V.Sharmaji and few latest authors works and articles.

Results

Though the drug Patola has been extensively used in various contexts of Brihatrayee, there are very limited references regarding its varieties. In Charaka Samhita, apart from Dashemani, Patola is mentioned in Shaka Varga along with another plant called Kulaka. Chakrapani comments on Kulaka as Patola Bheda i.e., a type of Patola (Cha.Chi. 3/189)[1]. This is the only instance where a variety of Patola has been dealt in Charaka Samhita (and that too only by Chakrapani and not in the original text). Acharya has used the parts like moolam and patram specifically while treating Kustha & Visarpa. Chakrapani himself has equated Kulaka with Karavella also in another instance.

Acharya Susrutha[2] has mentioned two varieties by names Patola & Patoli which shows the gender variation in the varieties. In Astanga Hridaya[3], Kulaka, Patola and Karavella are grouped under one head in *Shakavarga* which indicates that these three are plants with similar characters but are not one and the same.

Arunadatta equates *Kulaka* with "*Kakatinduka*" which further worsens the controversy. In this context Thakur Balwant Singh ji in his "Glossary of Vegetable drugs in Brihatrayee"[4] opines that Patolee is mostly used by Vagbhatta for either of two bitter varieties of Patola.

Sarangadhara[5] has mentioned the drug only in tiktadravyas which gives the knowledge of using only tiktha variety of Patola by Acharya.

Acharya Vrinda[6], has mentioned both Patola and Kulaka in the preparation of Patolaghritham, indicates both are two different plants.

Vangasena samhita[7] also uses the synonyms like Patoli and Kulaka for

DhanwantariNighantu[8]has divided Patola into two viz. Patola and Swadupatra Patola.

Raja Narahari[9], in his nighantu explains both tiktha and Swadupatola.

Madanapal Nighantu[10] of 12th cent AD has divided it as Patola and Raja Patolika in which the later is given by the synonyms like Jyotsnee, Tiktottama and Beejagarbha.

Kaiyadeva Nighantu[11] has given the divisions as Patola and Raj Patolika.

There is a description of Raja Patolika apart from Patola in Raj Vallabha Nighantu[12]

Bhavaprakash Nighantu[13]and Abhinava nighantu[14] mentions, Tikta Patolika as a variety of Patola, used as medicine and Swadu Patola as pathya in many disorders. Acharya Bhavamishra has used the term Kulaka and Patoli and mentioned the part to be used are moolam, patram etc., at some places in his chikitsagrantha. He has specially mentioned the leaves of" tiktapatoli" for scrapping on the scalp in Indraluptha.

Shaligram Vaidya[15] has given the descriptions of Patola, Tikta Patola and Raja Patoli; where in Raja Patoli is stated as Swadu Patola. He has however, not given his own views on the groupings.

In Sankara Nighantu[16], Patola is divided into Madhura and Tikta whereas Nighantu Kalpadruma classified it as Madhura and Katu.

Sodhala Nighantu has included Patola under Guduchyadivarga and told two varieties by names Patola and Kulaka.

Sodhala nighantu[17] explains the properties of both Tiktha Patolika and Swadu Patola separately.

Nighantu Ratnakar[18] has given three varieties viz. Patola, Patolee and Tikta Patola. Bhishagarya's Abhidhana Manjari[19], a literary work of Kerala, classifies it into Tikta Patola and Kulaka, among which the latter is given by the synonyms like Kakavinduka and Rajimana. Raja Bhoja in his book Raja Marthanda[20] gave the name Patola as synonym for Katuko shataki.

P.V. Sharmaji in his work on Dravyaguna[21] mentions Madhura Patola to be the gramya variety and Tikta Patola as the Vanya variety.

Discussion

From the above information, it is difficult to arrive at a definite conclusion regarding the identification of the variety of Patola which are mentioned in the various classics.

In Nighantus number of synonyms were given to explain Patola's morphology, habit, habitat and the principles of pharmacology. As there are similar synonyms to many drugs, it again leads to a lot of confusion in choosing true Patola. Most of the authors didn't mention the characters of the drug in their chikitsa granthas & the confusion continued in using its parts also. Only in few areas the part to be used was mentioned specifically by Acharyas. Nighantus have mentioned the dosha samana properties for each part, starting from leaf to its moolam. By understanding this, the usage is in practice. This gives a great hope in its usage. The leaf of bitter variety is adviced in inducing Vamana (vomiting), an internal purificatory method in Ayurveda. If virechanam (purgation) is required, (moolam) the root of Tiktha Patola is used.

When it comes to Saka (vegetables) or pathyas (wholesome foods) the leaf and fruit of Swadu Parval (*T.dioicaRoxbergii*) in Northern India & the fruit of the snake gourd (*T.anguinaLinnius*) in south India are in practice. Nalam (stem/petiole) is said to be kapha haram (elimination of mucilage).

Acharyas of late medieval period have started using the Patol, according to the disease & the dosha involved in it, based on the literature available. Sri. Nisteswarji of 20th century in his text Dravyaguna quotes that in each variety of Patola there are two sub varieties ,one the wild variety and the another vegetable variety. Wild varieties are usually for medicinal use. Wild variety of Trichosanthes cucumerina is of medicinal use where as its vegetable variety i.e., *Trichosanthes anguina* commonly called Snakegourd is used as vegetable. Likewise there are two varieties in *T.dioica*also.

Conclusion

After this critical review of the texts available, it is clear that whenever the drug Patola is mentioned for medicinal usage the leaf which possesses Tikta rasa should be taken. i.e., wild varieties like *T.cucumerina Linn* or *T.dioicaRoxb* has to be taken.

When it is mentioned as Sodhana dravya, Patola of Tiktharasa (bitter, wild) must be used. If the word Patola is used in Sakavarga or the Phalavarga, the leaves and fruits of vegetable varieties of *T.dioicaRoxb* (Parwal) or *T.cucumerina Linn,*i.e, *T.anguina Linn* (Snake gourd) are to be considered.

Whenever there is usage of the word Patoli, it indicates the female plant of Patola, and is seen in only *T.dioicaRoxb* variety, where the plant is dioecious (male and female plants are separate.). In *T.cucumerina* and *T.anguina* plants are monoecious (both sex on same plant.) When the word Kulaka is used by Acharyas, total stem along with leaves must be taken. The word Raja Patolika, Dirghaphala gives the knowledge of longer variety of Patola, hence the snake gourd (*T.anguinaLinnius*) must be taken. As the term Rajiman indicates the striations on the fruit, both the fruits of *T.dioica* and T.*anguina* are to be used. When the usage pertains to Panchatikthas, the vanya (wild) variety of both the species can be used as they are bitter in taste.

Thus the literature from various texts of Ayurveda gives a clear picture regarding the identification and the usage of true species of Patola.

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