

Physico and Phyto-chemical Analysis of Mayapala (*Quercus infectoria* Olive) With Effect to its Astringent Action

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ABSTRACT

Uterine prolapse is a common gynecological disorder found in multiparous women. Obesity and straining for constipation play role of contributing factors in the gradual aetio-pathology of this condition which finally gets converted into complete prolapse or procedentia. Hysterectomy is the only choice as surgical intervention to deal with. Mayaphala an Ayurvedic herb has an important and effective role in treating uterine prolapse by virtue of its astringent action, mainly due to its Phytoconstituents. A brief physico and phyto chemical analysis of Mayaphala (*Quercus infectoria* Oliv) shows Tannin as its chief chemical constituent to work as best astringent drug for uterine prolapse.

Key Words: Uterine prolapse, Astringent, Tannin, Flavonoids, Ash value, Mayaphala, Physicochemical, Phytochemical.

INTRODUCTION

Lifestyle disorders as well as clinical conditions like uterine prolapse called as non-communicable disorders (NCDs) are a biggest threat in developing country like India [1]. Most of such conditions are treated in modern medicine with the help of hazardous and prolonged medication along with surgical intervention. Uterine prolapse is a very common gynecological disorder found in multiparous and elderly women. Downward displacement of uterus from its normal position is called prolapse of uterus. Obesity and straining of constipation plays role of contributing factors for the condition [2]. Uterine prolapse if not treated in its early stage, gets converted into complete prolapse called as procidentia and finally hysterectomy is the only choice to deal with [3]. Ayurvedia as the ancient and Indian system of medicine has the potential role to solve this problem with the help of drug like Mayaphala. According to ayurvedic text *Rajnighantu*, Mayaphala is indicated in all such disorders where organs or body parts lose their muscle tone and get displacement by flaccidity in it [4]. Mayaphala helps to lift sagging tissues by its *shaithilyahar* property (astringent action)

MATERIALS AND METHODS

A standard crude sample of Mayaphala has collected in approximately 100gm quantity. After drug authentication a standard method of *Churna* (Powder) preparation has been adopted as per *Sharangdhara Samhita* [5] and the powder of Mayaphala has been prepared. Thereafter the powder sample of Mayaphala send to Central Research Facility (CRF) Laboratory for different tests which are as follows.

- Powder microscopy
- Microbial contamination

- Particle size
- Bulk density
- Tap density
- TLC
- Physicochemical parameters
 - a) Loss on drying
 - b) Total Ash value
 - c) Acid insoluble Ash
 - d) Water soluble extractive
 - e) PH
- Phyto-chemical evaluation for Proteins, Tannins, Flavonoids, Amino acids, alkaloids and steroids
- HPTLC
- Heavy metals

RESULT AND DISCUSSION

Mayaphala considered as the most efficacious drug for uterine prolapse as per *Rajnighantu*. To know its mechanism of action it is necessary to rule out its phytochemical composition. Therefore, to study its physico and phytochemical analysis we send the sample to Central Research Facility (CRF) Lab. Approved by CCIM, AYUSH, Govt. of India, Shahapur, Belgavi-03 and Auriga Research Private Limited Lab. Bangalore. After its phyto-chemical analysis we found that Mayaphala *Churna* (powder) contains proteins, Tannins as phenolic content and flavonoides as major phyto constituents. These phyto constituents with their quantification are as given below.

Table No. 1 Showing Major Phytoconstituents with their Quantification.

Phyto constituent	Type of Extract	Results
1) Proteins	Water	1017.89 ± 11.79 µgm/ml
2) Phenolic content (Tannin)	Water	676.29 ± 0.50 milli gm GAE/gram of extract
	Alcohol	546.26 ± 1.47 milli gm GAE/gram of extract
3) Flavonoids	Water	10.64 ± 0.26 milli gm QE/gram of extract
	Alcohol	0.83 ± 0.26 milli gm QE/gram of extract

From above findings we can say that Tannin is a phenolic compound present as chief phytoconstituent in Mayaphala. It exerts astringent action responsible to act as astringent agent and therefore an effective drug in uterine prolapse [6].

CONCLUSION

Uterine prolapse, a very common but routinely ignored and hiding condition amongst females have a challenging and permanent solution in the form of Mayaphals, to get rid of uterine prolapse and its consequences. As this disease has gradual onset to convert into complete proidentia internal or systematic use of Mayaphals *churna* (Powder) not only retards the condition but also strengthen the organ. Phyto-chemical analysis found out Tannin as a main phytoconstituent in Mayaphala to overcome uterine prolapse.

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