



Herbal Treatment and Management of Polycystic Ovary Syndrome (PCOS): A Review

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ABSTRACT

Polycystic Ovary Syndrome is considered to be one among the most prevalent problem in the females nowadays. Upto 70% of the women's on global scale suffering from PCOS remained undiagnosed. It commonly affects the reproductive aged women which is the leading cause of infertility. Polycystic Ovary Syndrome runs in the families, but there are ethnic variations in how it manifests itself and how it affects people. It not only affects the physical wellness but also affects victim mentally and emotionally. The present work tries to focus on the herbo-economical aspects of Polycystic Ovary Syndrome.

Keywords: PCOS, Herbal, Menstrual irregularities, Marketed, Formulations

INTRODUCTION:

Polycystic ovary syndrome (PCOS) is an endocrine disorder that affects one in every 15 women worldwide. This disorder is mainly characterized by increased levels of male hormones (testosterone). This is characterized by acne, hirsutism, miscarriage and even infertility in women. In some case it is also being characterized by long-term insulin resistance. PCOS is a disorder that can be treated with naturally available herbs and allopathic remedies that work against the PCOS mechanism. The people with the family history of Type II diabetes are at a higher risk of POCS occurrence. It is common hormonal conditions the affects the women of reproductive age with symptoms appearing over time. Polycystic Ovary Syndrome can also lead to anxiety, negative body image and depression which also affect the social circle of the person concerned [1-5]. At present there is no cure for Polycystic Ovary Syndrome but treatment can improve the symptoms. There are the numerous herbs available for the treatment purpose; still the present work tries to focus on the three natural herbs.

Aloe Vera



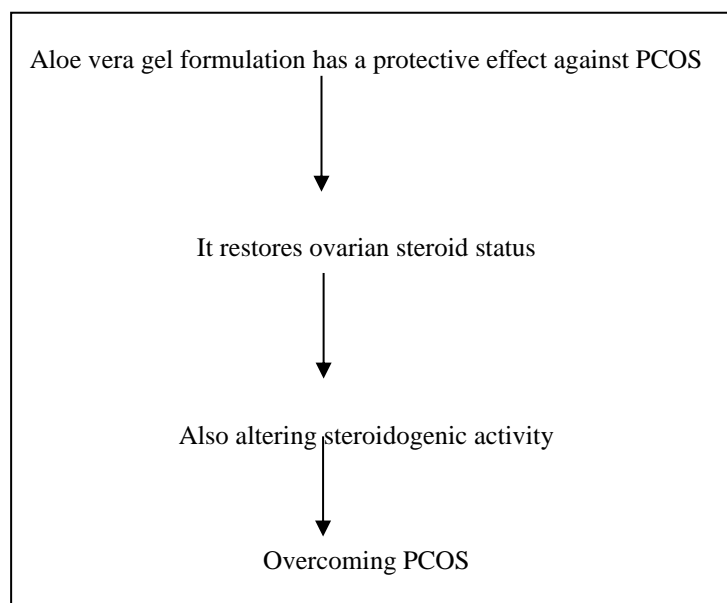
Figure 1 Aloe Vera



Biological source:- Aloe is obtained from the dried juice of the leaves of *Aloe barbadensis* belonging to the family Liliaceae.

Uses:- Aloe vera has got the number of applications as gel apart from its use in PCOS. These applications include anti-inflammatory, anti-aging, acne treatment; wound healing, lightning blemishes etc. But its application in the PCOS is of prime importance in the view of present study work. The below mentioned mechanism has justified its importance in the medical field for overcoming or managing PCOS. The plant compounds such as phytosterols and phytophenols in aloe vera gel is basically responsible for the treatment of PCOS.

Mechanism of Action in PCOS [6]



Cinnamon

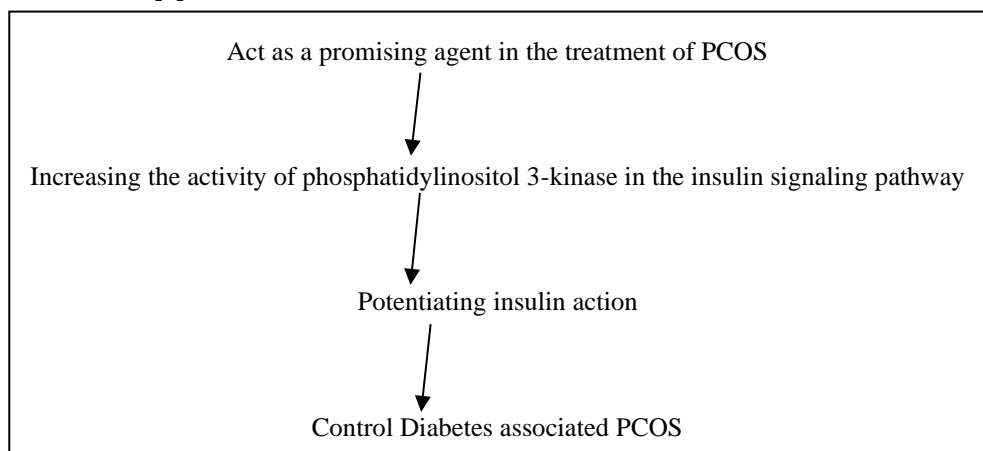


Figure 2 Cinnamon Bark

Biological source:- Cinnamon is the dried inner bark of the coppiced shoots of *Cinnamomum zeylanicum* Nees., belonging to family Lauraceae.

Uses:- Cinnamon is used as an aromatic, carminative, flavouring agent, analgesic, antiseptic, antirheumatic, antispasmodic, demulcent, digestive, expectorant, stomachic, diaphoretic, antibacterial, antifungal, etc. It stops vomiting, relieves flatulence and is given with chalk and as astringents for diarrhoea and haemorrhage of the womb. It is also used in the treatment of bronchitis, colds, palpitations, nausea, congestion, and liver problems.

Mechanism of Action in PCOS [6]



Fennel

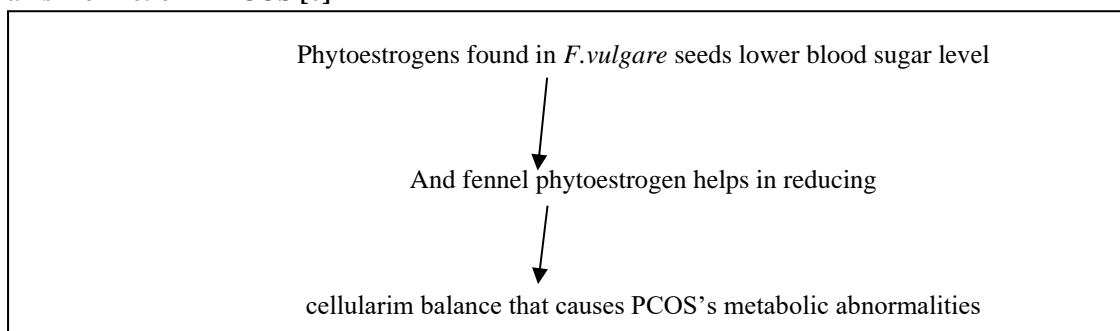


Figure 3 Fennel Seeds

Biological source:-Fennel consists of the dried ripe fruits of *Foeniculum vulgare* Miller, belonging to family Umbelliferae.

Uses:-Fennel has been used as a flavoring agent, a scent, and an insect repellent, as well as an herbal remedy for poisoning and stomach conditions. It has also been used as a stimulant to promote milk flow in breast-feeding and to induce menstruation.

Mechanism of Action in PCOS [6]



Commercial Aspects For PCOS/PCOD

As per the market scenario, there are large numbers of products available in the market for the treatment of PCOS/PCOD. The economical prospective of these products varies depending on the type and form of formulation. The basic treatment tenure for PCOD varies from 6months to years depending on the other factors too. These factors include use of birth control pills along with the life style. In present the various herbal formulation types are prevailing in the market which varies in price too. The economical burden also varies around INR 700-3500 per month.

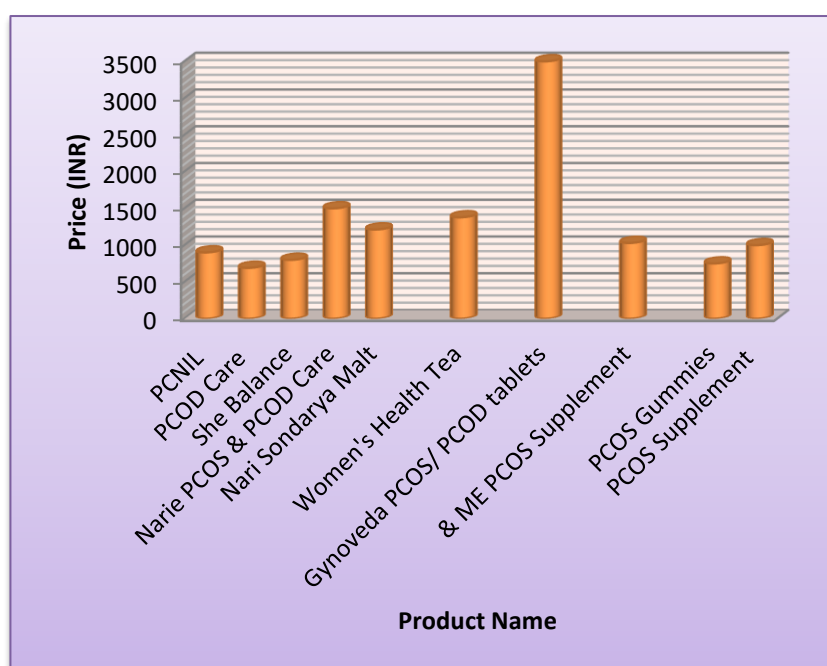


Figure 4 Economical Prospectus of Herbal PCOD/PCOS Formulations

According to a published data it was presumed that herbal treatment for PCOS is the second most effective way after homeopathic treatment. The cost effective treatment varies depending on the severity of condition, the geographical scenario and the type of treatment. Also the cost of treatment in India varies from 400-800 with herbal products while the surgery cost nearly 30,000-50,000 INR. In UK to it varies a lot with average treatment cost around GBP 950 per year. The report also claim that the Global market at present stands at USD 3.2 billion in 2021 which is expected to reach USD 4.9 billion by the year 2030 [7-13].

Table 1 Marketed Formulation Of The Allied Herbs For Treatment Of PCOS [14]

S. No.	Product Name	Formulation Type	Company	Price (INR)
1.	PCNIL	Tablets	Inducare Pharma	900
2.	PCOD Care	Tablets	Nveda Ayurvedic herbs	690
3.	She Balance	Tea	Teacurry	799
4.	Narie PCOS & PCOD Care	Tablets	ZeroHarm Sciences	1500
5.	Nari Sondarya Malt	Malt (Semisolid form)	Amrutam	1212
6.	Women's Health Tea(Formerly Called Period Care Tea	Tea	Namhya	1378
7.	Gynoveda PCOS/ PCOD tablets	Tablets	Gynoveda	3500
8.	& ME PCOS Supplement	Powder	-----	1029
9.	PCOS Gummies	Gummies	Carbamide Forte	750
10.	PCOS Supplement	Tablets	Health Veda Organic Private limited	999



Conventional Drugs Available For PCOS Management

There are the numbers of drugs that are being utilized by the patients for the treatment of PCOS. The choice of drug recommendation depends upon the symptoms associated with PCOS. The table 2 contains the list of drugs being presently utilized in the symptomatic relief of conditions associated with PCOS.

Table 2 Commercially Available Drugs For PCOS Treatment

S. NO.	Drug Name	Utilization
1.	Clomiphene	Treatment of PCOS related infertility
2.	Metformin	Helps with insulin resistance (Type II diabetes) which is the common problem with PCOS. Also regulates menstrual cycle.
3.	Spironolactone	Effective in treating Hirsutism
4.	Sibutramine	Treat obesity along with Hirsutism
5.	Eflornithine Cream	Manages unwanted facial hair
6.	Combined Hormonal Birth control pills	Control Acne, Hirsutism and regulates menstrual cycle

Conclusion

There are many research articles available on the PCOS and other associated problems where only herbal or surgery is being suggested. However, still the herbal treatment is considered to be the safe and effective method. The present work also suggested that the herbal treatment for PCOS will have lesser side effects in relationship to conventionally available drugs. The herbal treatment and manage mental effects are being more acceptable in the present scenario than the ongoing therapies. Further, there is a possibility that the herbal formulation can be accompanied with novel drug delivery carriers with long lasting effects.

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