

Research Article

TREATMENT ON POLYCYSTIC OVARIAN DISEASE

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ABSTRACT

Polycystic ovary syndrome (PCOS) is the most common endocrine disorder in women. The clinical manifestation of PCOS varies from a mild menstrual disorder to severe disturbance of reproductive and metabolic functions. These could be ovulatory dysfunction-related infertility, menstrual disorders, or androgen-related symptoms. Weight loss improves the endocrine profile and increases the likelihood of ovulation and pregnancy. Normalization of menstrual cycles and ovulation could occur with modest weight loss as little as 5% of the initial weight. In PCOS, anovulation relates to low follicle-stimulating hormone concentrations and the arrest of antral follicle growth in the final stages of maturation. This can be treated with medications by an ayurvedic tablets containing drugs such as shatavari, shankhbhasma, guduchi satva. Chronic anovulation over a long period of time is also associated with an increased risk of endometrial hyperplasia and carcinoma, hirsutism, acne, alopecia which should be seriously investigated and treated. Alternative ayurvedic medicine has been emerging as one of the commonly practiced medicines for PCOS. In this research paper the treatment of PCOS with medicinal system namely Ayurveda, taken into account to get best curable medicinal system for PCOS. Ayurveda can be considered as best cure and promising treatment with no side effects.

Keywords: PCOS/PCOD, polycystic ovaries, syndrome, follicles, cysts, menses, ayurvedic treatment.

INTRODUCTION

Polycystic Ovarian Syndrome also known as PCOS OR PCOD (Polycystic Ovarian Disorder) is a very common hormonal disorder and a leading cause of female infertility worldwide. PCOS is also called as Stein-leventhal Syndrome after two doctors who first described it in 1935 PCOS is one of the most endocrinopathy affecting women. The Rotterdam 2003 criteria defines PCOS as incidence of any two of 3 key criteria namely, oligo ovulation hyper androgenism and polycystic ovaries(PCO). Polycystic Ovarian Syndrome is a condition in which women typically have many number of small cysts around the edge of their ovaries. Polycystic ovaries mean the ovaries containing a large number of cysts that are not bigger than 8mm and develop more follicles than normal very month. Polycystic ovary start maturing at least twice as many follicles compared normal most of which enlarge and mature but do not release an egg. The cysts are the egg containing follicles that do not develop properly because of hormone A imbalance.¹

Symptoms like irregular, infrequent periods within 3 or 4 years of starting menstruate lighter very heavy bleeding during period weight gain, excessive hair growth to varying degrees on face, chest, and lower abdomen. Moderate abdominal discomfort during periods, acne, and excessive skin growth on neck or in armpit also called as skin tags. Bone pain [arthralgia] and hair loss [alopecia], constipation, flatulence, and indigestion. PCOS is also called as polycystic ovary disease [PCOD]. Stein-leventhal syndrome, ovarian hyperthecosis and sclerocystic ovary syndrome.³

Hence in present work we have formulated tablets of herbal ingredients like Shatavari, Shankhbhasm and Guduchi satv. The name 'Shatavari' denotes 'the curer of hundred diseases.' The major active constituents of Asparagus racemosus are steroidal saponins. Isoflavones, asparagamine, racemosol, polysaccharides, mucilage, vitamins A, B1, B2, C, E, Mg, P, Ca, Fe, and folic acid present in roots, medicinally important, endangered, galactagogue this makes the herb antioxidant. Shankha Bhasma is an Ayurvedic medicine prepared from Conch shell. It is used in Ayurvedic treatment of gastritis, abdominal pain, malabsorption syndrome. It provides menstrual regularity.

Giloy Sat (also called Giloy Satva, Guduchi Satva and Amrita sat or Satva) is an ayurvedic herbal water extract prepared by macerations (cold soaking). It is used in Ayurvedic treatment of burning

sensation in feet, nasal bleeding, bleeding per rectum, menorrhagia, Pthisis, emaciation etc. It boosts immunity. Giloy Sat corrects liver functions. It is a good immuno-modulator.

MATERIALS AND METHODS

Method of preparation

1. Weigh and mix the ingredients (excluding the lubricant or binder).
2. Prepare the damp mass by adding the binder solution.
3. 3-Screen the dampened powder into pellets or granules (by using 6-12 mesh screens).
4. Dry moist granules (in oven at temperature not exceeding 55°C).
5. Add Lubricant on granules.
6. Compress granules into tablets by fed into the die cavity.

Table 1: Formulation table of tablet preparation

S. No.	Ingredients	F1	F2	F3	F4	Role of ingredients
1	Shatavari	130mg	140mg	150mg	150mg	Antioxidant, Tonic
2	Shankhabhasma	130mg	130mg	120mg	140mg	Menstrual regulator, skin toner
3	Guduchi satva	130mg	120mg	120mg	110mg	Immunity enhancer
4	Acacia gum	110mg	110mg	110mg	100mg	Binder

Dosage of drugs:

1. Shatavari- 250-500 mg twice a day .
2. Shankhabhasma- 250-500 mg twice a day.
3. Guduchi satv- 125-250mg twice a day.

EVALUATION OF TABLET

The parameters of evaluation of tablet are as follows:

Table 2: Evaluation table of tablet size

Table No.	1	2	3	4	Average
Diameter(mm)	0.8	0.8	0.9	0.8	0.8
Thickness(mm)	0.4	0.5	0.4	0.4	0.4
Hardness(kg/cm ²)	2.1	2.1	2.2	2.1	2.1

Dissolution test:

Dissolution test was carried out in 0.1 N HCl and observations were recorded at 15 min intervals.
Observation:

Table 3: Dissolution test evaluation

Time	Absorbance F1	Absorbance F2	Absorbance F3	Absorbance F4
15	0.117	0.153	0.182	0.115
30	0.205	0.207	0.236	0.202
45	0.236	0.226	0.245	0.221
60	0.248	0.238	0.258	0.233

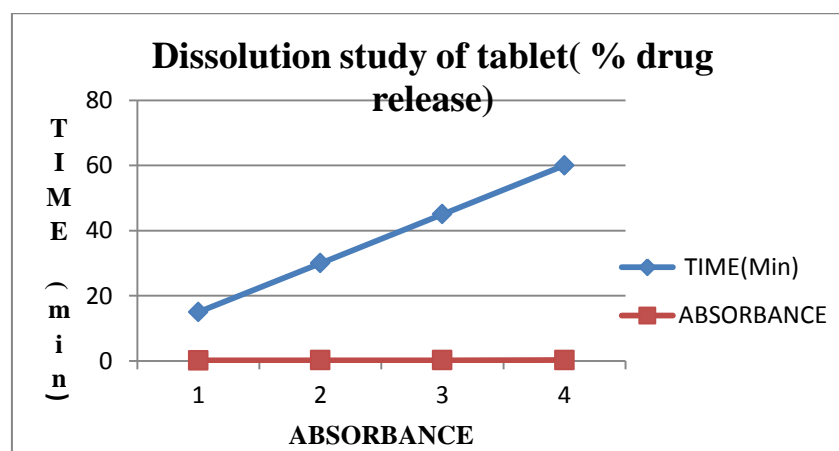


Fig. 1: Dissolution test evaluation

Testing of tablet sample in blood

[A] Blood clot formation:

1. Collect the blood sample from person by vein puncture site method.
2. Take the blood into well washed and dried test tube.
3. Allow the blood to clot at room temperature.
4. Or take the blood drops on petri dish to clot the blood.
5. Wait for certain for clotting the blood.

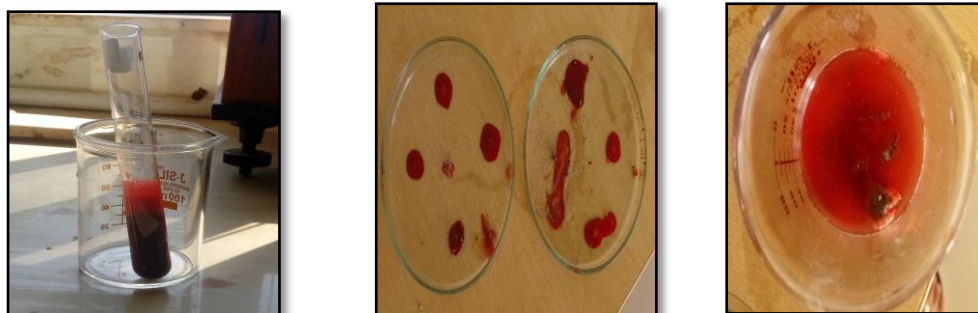


Fig. 2: Collection of blood and Blood clot formation

Drug preparation

1. Take the 5 tablets of 500 mg of drug and triturate it with mortar pestle.
2. Take a well washed 100 ml beaker.
3. Take 40 ml water or phosphate buffer of pH 6.8 in beaker and add triturated drug powder to it.



Fig. 3: Drug preparation

[C] Dissolution or break down of clot in drug:

1. Add the clotted blood in given prepared drug.
2. Check the action of drug on the blood clot.



Fig. 4: Dissolution of clot in drug

OBSERVATION:

- **Observation 1:** After 17 hrs the clot size is reduced upto this as follows:



Reduction
of clot size after 17



Seperation of reduced clot.



view of clot

Obsevation 2: After 17+ 24= 41 hrs the clot size is reduced upto this as follows:



Fig. 5: Reduction of clot size after 41 hrs

Description:

- **Observation 1:**
It was observed that after 17 hrs the clot was get breaked and disaggregated and reduced upto the size shown in image no. 6.
After filtration the clot get separated from the drug and it easily get observed on filter paper as per image no.8.
- **Observation 2:**
It was observed that after 41 hrs the clot get disappear or dissolve in drug completely as shown in image no. 9.
Hence, the drug takes total 41 hrs to complete dissolution of clotted blood to dissolve in drug.
- **Additional obsrevation:**
The powder of drug binds blood to itself by breaking down the blood clot and disintegrate the blood clot.



Fig. 6: Observation of powder

RESULT

1. The evaluation of tablet was found to be:

1. Thickness- 0.4mm
2. Diameter- 0.8mm
3. Weight Variation limits- 466.4 – 515.5mg
4. Disintegration time- 9 min 25sec
5. % drug release of tablet was found to be:

Sr. No.	Time (min)	% drug release
1	15	65.16%
2	30	84.6%
3	45	87.8%
4	60	92.5%

2. The clot dissolves in drug completely in 41 hrs shows the activity of drug on polycystic ovarian disease.

3. From the observation and evaluation it was concluded that the F3 observation is having perfect activity against PCOD than others.

4. From the above observation, it was seen that the given tablet containing drugs shatavari, shankhbhasma and guduchi satva shows action over polycystic ovarian disease.

CONCLUSION

1. From the above result, it was concluded that the formulated ayurvedic tablet can be use in treatment of polycystic ovarian disease.
2. From above results and observation it was concluded that the preparation and evaluation of ayurvedic tablet was carried out successfully.
3. As time increases the% drug release also increases.
4. Improvement by this ayurvedic tablet treatment can result in weight loss, improved fertility, prevention of diabetes and overall improvement of health.

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