



Role of *Nisha-amlaki* In PCOS: A Conceptual Study

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Abstract-

Introduction: Polycystic ovarian syndrome (PCOS) is characterised by excessive androgen production which interferes with the reproductive, endocrine and metabolic functions. PCOS causes hormonal imbalance in women leading to menstrual irregularities, ovulation and fertility problems¹. Woman suffering from PCOS can become insulin resistant due to hormonal imbalance. Diabetes mellitus type 2 is a long term metabolic disorder that is characterized by high blood sugar, insulin resistance and relative lack of insulin.

Methodology: The efficacy of *Nisha-amlaki*² (*Astang haridya Ch. sth. 12/5*) is widely recommended in *Ayurvedic* texts for normalizing the blood sugar level. Since the pathology of *Prameha* and PCOS are similar, so in this way we can use drug which described in texts in respective to *Prameha* to normalise blood sugar, also use in PCOS.

Conclusion: Thus, this study is aimed at exploring the role of above given *Nisha-amlaki* in the treatment of PCOS.

Key words- Hormones, Insulin resistance, *Nisha-amlaki*, *Prameha*, Polycystic ovarian disease.

INTRODUCTION:

Polycystic ovarian syndrome (PCOS) is a multisystem endocrinopathy in women of reproductive age with the ovarian expression of various metabolic disturbances and a wide spectrum of clinical features such as obesity, menstrual abnormalities and hyperandrogenism³.

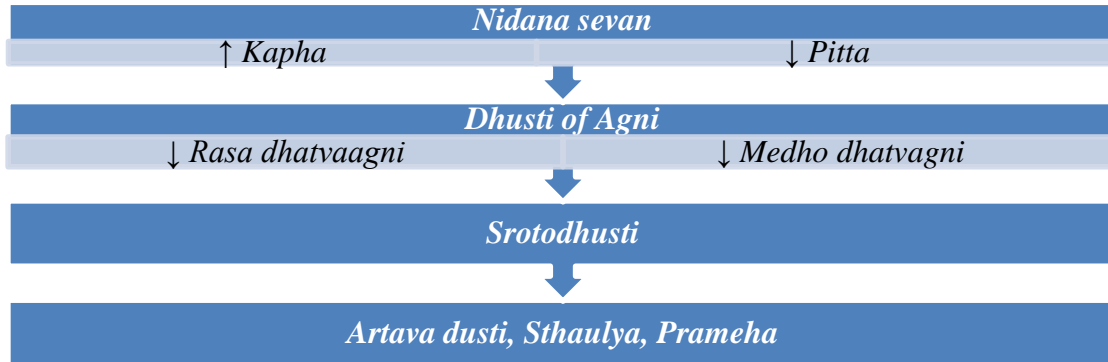
PCOS and *Prameha* (w/sr to T2DM) are both obesity- related conditions that share insulin resistance as an important pathogenic factor. Some of the women who develop cardiovascular disease, hypertension, endometrial cancer and type 2 diabetes mellitus later in life appear to have suffered from PCOS in earlier years. About one third of obese PCOS patients have impaired glucose tolerance (IGT) and 7.5% to 10% have type 2 diabetes mellitus. These rates

are mildly increased even in non-obese women who have PCOS (10% IGT; 1.5% diabetes)⁴. Insulin resistance and hyperinsulinaemia are commonly exhibited in PCOS⁵.

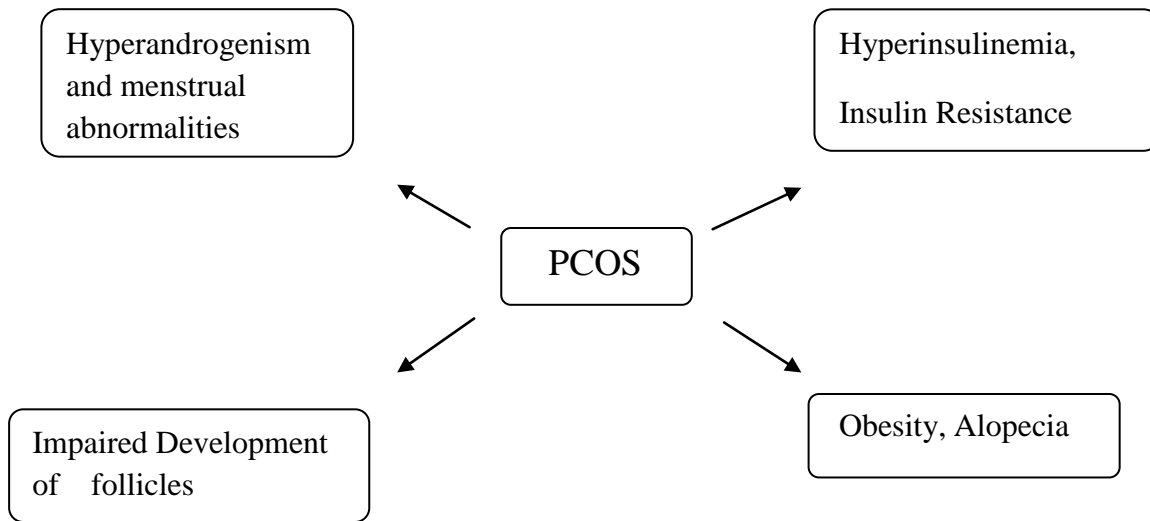
- ↑insulin level → theca hyperplasia → secrete androgens, testosterone & epiandrosterone
- Epiandrosterone → converted in peripheral fat to oestrone → leads to rise in oestrogen and inhibin level → in turn causes ↑LH surge
- Ultimately results in Hyperandrogenism → lowers the level of SHBG in liver → rise in level of free testosterone → Hirsutism

Relations in Pathophysiology of Polycystic Ovary Syndrome and *Prameha*:

ACCORDING AYURVEDA:



ACCORDING MODERN⁶:



OBJECTIVES:

- To study the etiopathogenesis of PCOS.
- To prove efficacy of *Nisha-Amalaki* on insulin resistance in PCOS.

❖ Classical text books of *Ayurveda*, the text books of modern medical science and Internet.

MATERIALS & METHODS:

DISCUSSIONS:

The efficacy of *Nisha-amalaki* (*Astang Haridyam Ch. sth. 12/5*) is widely

recommended in *Ayurvedic* texts for normalizing the blood sugar level.

I. *Haridra*:

*Abaddha medas*⁷ (free circulating fat) is the tissue mandatorily involved in the causation of *Premaha*. *Haridra* has lipolytic and anti- cholesterol property⁸. *Haridra* destroys the accumulated fat, cholesterol, triglycerides which helps in the regression of pathology in *Premaha*.

These actions are carried out by its *Katu -Tikta Rasa, Ruksha-laghu Guna, Ushna Virya, Katu Vipaka* and *Kapha-pittahara* action⁹.

By all its properties *Haridra* removes blocks in the liver and restores the haemopoietic functions, also has metabolic correction and anti-oxidant property. In this way *Haridra* regularizes and stabilizes the

gut and cellular metabolism. This includes the proper production of insulin (*Agni*) and its proper utilisation in the periphery, warding off the insulin resistance.

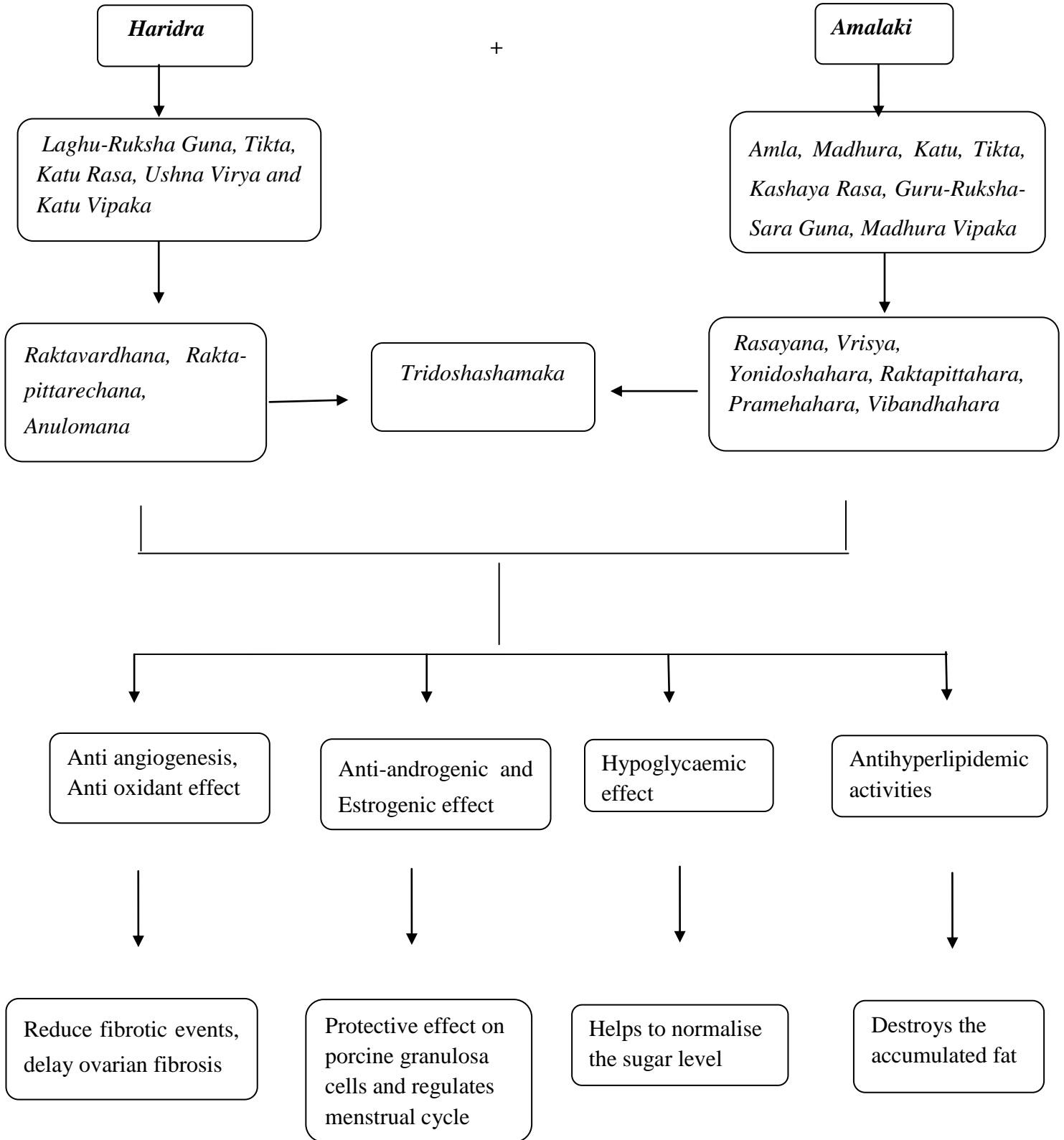
Anti-androgenic activity of *Haridra* was also evaluated. In PCOS high androgen levels are found in female body. *Haridra* can certainly be useful in restoring normal levels and thus controlling PCOS.

II. *Amalaki*:

Amalaki has positive effects on the pancreas, where insulin is produced and its content of chromium helps to manage blood sugar levels. *Amalaki* has also anti-diabetic property and hypoglycaemic activity¹⁰.

Amalaki also has hypolipidemic and anti-atherosclerotic activity, anti-oxidant, hepatoprotective activity so it ultimately works as *Rasayana*.

MODE OF ACTION OF NISHA-AMALAKI:



CONCLUSION:

- ❖ According to *Ayurveda*, *Prameha* is characterised with *Medodusti* thus resulting in *Sthoulyata* and we know insulin resistance is the main pathogenesis of T2DM.
- ❖ At the same time, PCOS is a heterogenous endocrinopathy mostly associated with obesity and insulin resistance with resultant hyperinsulinaemia is its main precursor as described earlier.

- ❖ Since PCOS and *Prameha* appear to be similar diseases with similar pathogenesis, the drug's use to manage *Prameha* will also manage PCOS.
- ❖ Thus, we can conclude from the present study that *Nisha- Amalaki* have a good effect on insulin resistant which is the chief cause of PCOS so we can rely on the hypothesis that *Nisha-Amalaki* will have good effect on all the sign and symptoms of PCOS.

Reference:

- ¹Dutta D.C., DC Dutta's Text book of Gynaecology, 6th edition, ed. by Hiralal Konar, Nov.2013,28;p459.
- ²Vagbhata, *Ashtanga Hridaya*, with commentaries of Arunadatta & Hemadri, edited by Bhisagacharya Pt. Hari Sadashiva Shastri Paradakara, 9th edition, published by Chaukhambha Sanskrit Sansthan,2005; Chikitsa sthanam, Pramehachikitsa adhayaya 12/5;p678.
- ³Dutta D.C., DC Dutta's Text book of Gynaecology, 6th edition, ed. by Hiralal Konar, Nov.2013, 28;p459.
- ⁴Berek, Jonathan S., Berek & Novak's Gynecology, 14th edition,2007,28;1070.
- ⁵Jeffcoate's principles of Gynaecology Revised and updated by Pratap Kumar, NarendraMalhotra 7th Edition, 2008, Published by Jaypee Brother Medical Publishers (P) LTD; 23;p386.
- ⁶Jeffcoate's principles of Gynaecology Revised and updated by Pratap Kumar, NarendraMalhotra 7th Edition, 2008, Published by Jaypee Brother Medical Publishers (P) LTD; 23;p386.
- ⁷*Charaka Samhita* (elaborated by *Charaka* and *Dridhabala* , edited by *Vd. Jadavji T Acharya*, with *Ayurveda-Dipika* Commentary by *Chakrapanidatta*) *Nidana Sthana*, Chapter 4/7, 2nd edition, published by Chaukhamba Surbharati Prakashana, Varanasi, 2005; 212.
- ⁸Database of medicinal plant used in *Ayurveda* ; CCRAS ; Vol – 1

⁹ The Ayurvedic pharmacopoeia of India Vol - 3

¹⁰ B.S. Ashok Kumar, Saleemullakhan, Gopi Setty Saran, R. Nandeesh & N.K. Manjunath. *In Vitro* Antidiabetic Activity of *Nishamalaki Churna*. *Sains Malaysiana*, 2013; 42(5): 625-628.