

EFFECT OF NASYA IN ENDOCRINAL DISORDERS W.S.R TO FEMALE INFERTILITY-RETROSPECTIVE ANALYSIS OF CASE SERIES

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ABSTRACT

Background- “*Aputrasya gatir naasti*” means without a child there is no eternity. Couples that have been unable to conceive a child after 12 months of regular sexual intercourse without birth control are infertile. As per ayurveda infertility can be classified into 3 types i.e *Vandya* (Absolute sterility), *Sapraja* means Women in her reproductive age does not conceive after giving birth to one or more children- (secondary infertility). *Apraja* means women conceive after treatment (Primary infertility). *Nasya* can be tried in female infertility especially which is produced by the hormonal imbalance. Retrospective Analysis of case series is required to generate the evidence based medicine. **Aim and objectives:** To evaluate the role of *nasya* in endocrinal disorders w.s.r to female infertility. **Materials and method:** Data of female infertility patients being treated with *nasya* at KLEU'S BMK Ayurveda Mahavidyala, Belgavi, were screened and included for the analysis. **Results:** In 6 patients the size of the ovary was increased in 4 patients. Follicle was ruptured in two patients. Endometrial thickness was increased in two patients.

Keywords: *Nasya*, PCOD, Infertility, Hormonal imbalance

INTRODUCTION

WHO estimates the incidence of primary infertility in India to be 3.9-16.8%. [1] Among which prevalence of women reporting primary infertility due to PID, STI was found to be high [2]. Enlisting the various factors of infertility hormonal factors account for 20% of the causes of female infertility[3] like Low

levels of LH & FSH, PCOD, Early menopause, Secondary amenorrhea caused by hormonal disturbance from the hypothalamus and the pituitary gland, Hyperthyroidism, Hypothyroidism, POF.

The available treatment modalities for these issues hardly address the correction of internal

mechanism of these glands but instead aim at artificial supplementation of the same.

Hence to aim at this lacunae in the treatment *nasya* which has been explained as a treatment that directly acts on *shiras* with the help of *shringataka marma*[4] was hypothesized to stimulate the proper functioning of the glands and was evaluated in 6 different cases of female infertility having the common feature of hormonal imbalance.

Brief overview about endocrinal disorders which produces female infertility:

- Hypopituitarism: The hormones secreted by the anterior pituitary are LH, FSH, ACTH, GH and PRL. Decrease in all the anterior pituitary hormones is more common than the individual hormone. Among all these hormones LH and FSH are the main two which takes major part in regulating the menstrual cycle. Usually it is associated with decreased LH, FSH level and increased TSH level [5]. TSH is the hormone which control basal metabolic rate, takes important role in growth and maturation and affects every organ in the body.
- PCOD: There is too much production of male hormones i.e. androgens [6]. Symptoms are irregular periods, Absence of menstruation, Excessive facial and body hair, Hair thinning and loss, high blood pressure, Acne, Weight gain , depression and stress.[7]
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- Hyperthyroidism: Hyperthyroidism is nothing but overactive thyroid. There is excessive secretion of T3 and T4 and decreased secretion of TSH. Symptoms are

intolerance to heat, Fine-straight hair, Bulging of eyes, facial flushing, Enlarged thyroid, tachycardia, increased systolic blood pressure, breast enlargement, Weight loss, Muscle wasting, Diarrhea, Menstrual changes (Amenorrhea), Tremors, Finger clubbing. Here *srotodushti* is present in the form of *atipravritti*. [8] *Vata* and *pitta* are in increased *avastha* causes the *artavakshaya* i.e *kshyatmaka dushti* causing *abhijotsarga*, hence *madhura*, *snigdha*, *guru*, *manda*, *sthairyra vardana*, *poshana* and *kinchit sheeta dravyas* should be used to treat the condition.

- Hypothyroidism: The condition is associated with decreased production of T3 - T4 and increased production of TSH, symptoms are intolerance to cold, receding hairline, facial and eyelid edema, dull-blank expression, extreme fatigue, thick tongue, slow speech, anorexia, brittle nails and hair, hair loss, apathy, lethargy, dry skin, muscle aches and weakness, constipation, weight gain, bradycardia [9]. By using the *nasya* it is possible to treat only the tertiary- Hypothyroidism, where the hypothalamus is fails to produce sufficient thyrotropin releasing hormone. Here *srotodushti* is present in the form of *sanga* so the drugs which are having *ushna*, *teekshna guna* should be used [10].
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- Premature ovarian failure: When a woman's ovaries stop working before she is 40[11]. Approximately one percent of women have POF. The cause can be natural or it can be a disease, surgery, chemotherapy or radiation. Women suffering

from the POF usually experiences menopausal symptoms that are more severe than the symptoms found in older menopausal women [12].

Materials and methods:

Sample size-6

Study design:

Retrospective Analysis

Treatment:

- Sthanika abhyanga to mukha with ksheerabala tailam followed by bashpa swedana
- Nasya with shatavari ghritam, 8 drops in each nostril

Selection of case reports:

Completed case reports of female infertility patients where an attempt was made to treat by

Case details:

Table Number 1:

No of Cases	Age	Diagnosis & Complaints
Case 1	30 years	Primary infertility, PCOS, No issues since 5 Years
Case 2	24 years	Primary infertility, PCOS
Case 3	27 years	Secondary infertility
Case 4	25 years	Primary infertility, No issues since 2 years, PCOD
Case 5	27 years	Miscarriage at 6 th month, PCOD
Case 6	28 years	Primary infertility, PCOS, Hypothyroidism

Observation:

Case reports presented the patients were diagnosed with Infertility (6), Polycystic ovarian syndrome (6), Primary infertility (4), Sec-

using *Nasya karma*. Total 10 patients undergone *nasya karma* for infertility but only 6 case reports were complete with all details which were selected.

Exclusion of case reports:

- Incomplete case reports where complete details of *Nasya karma* and USG reports were not mentioned.
- Patients who are treated with different modality at the same time
- Case reports of patients who discontinued *Nasya karma*

Criteria for assessment:

Follicular study (Before and after the completion of *Nasya karma*).

ondary infertility (1), Miscarriage (1). All patients were belonging to the age group of 20-30 years.

Results:

Table Number 2:

	Rt Ovary (BT)	Lt Ovary (BT)	Rt Ovary (AT)	Lt Ovary (AT)	Endometrial Thickness (BT)	Endometrial Thickness (AT)
Case 1	10 mm	12 mm	10 mm	18 mm (Ruptured)	8.8mm	11 mm
Case 1	8.7 mm	7.6mm	Same	16.6mm Ruptured	4.2 mm	9 mm
Case 2	7.7 mm	10 mm	Same	16mm Ruptured	4.8 mm	5 mm
Case 3	8.3 mm	8.5mm	8.4 mm	8.6 mm	8 mm	8.4 mm
Case 4	7.5 mm	7.6 mm	14.4 mm	No dominant follicle	6 mm	6.6mm
Case 5	No changes	-	-	-	6 mm	10 mm
Case 6	7 mm	6 mm	7 mm	12 mm	8.4mm	8.6 mm

DISCUSSION

Discussion on results:

After the *nasya karma* size of the ovary was increased, Right ovary from BT= 8.200 ± 1.066 (Mean \pm Std.Dev) to 9.367 ± 2.664 (Mean \pm Std. Dev) and Left ovary from 8.617 ± 2.111 (Mean \pm Std.Dev) to 13.13 ± 4.39 (Mean \pm Std. Dev). The first patient was treated twice with the *nasya*, in the first sitting size of the Left ovary was increased from 12 mm to 18 mm and the follicle ruptured. In the second sitting again the left ovary size was increased from 7.6 mm to 16.6 mm even the follicle ruptured. In case 2 left ovary size was increased from 10 mm to 16 mm and follicle was ruptured. In case 3 minimal changes were observed. In case 4 the Right ovary size was increased from 7.5 mm to 14.4 mm. In case 6 left ovary size was increased from 7mm to 12mm but in case 5 no changes were observed. Among 6 patients the size of the ovary was increased in 4 patients. Follicle was rup-

tured in two patients. Endometrial thickness was increased in two patients.

Discussion on Drugs:

The *Shatavari gritha*, contains phytoestrogens a group of naturally occurring compounds that have a chemical structure very similar to estrogen which plays a significant role in controlling a woman’s menstrual cycles and is essential for reproduction. Phytoestrogens, which displaces the human estrogen, support female hormone levels by exerting an estrogen like effect on the reproductive organs [13]. The main action of phytoestrogens is due to their adaptogenic activity. They may be beneficial in both hypo estrogenic and hyper estrogenic state in the body. Thus, they have mixed estrogenic and antiestrogenic action, depending on target tissues.

Shatavari is indicated in Artava Atikranta (Menopause) *avastha* and acts like Amrita in this condition. It is indicated in *Artavadushti* in the form of *Nasya, Pana, Snehana, Abhyanga* and *Basti*. It contains *katu tikta rasa*,

laghu ruksha guna, Ushna veerya and Katu Vipaka, Vata kapha shamaka ultimately leads to Karmas such as Deepana, Pachana, Vilayana, Anulomana and Srotoshodana resulting in Amapachana and Vata kapha dosha shaman which in turn removes the Sanga and Avarana leading to proper functioning of Vayu which regulates the Beejagranthi Karma resulting in Beejotsarga.

“Sarvada sarva bhavanam samanyam vridhdi karanam” so when we use the gritha nasya that increases the Tarpaka kapha and subsides the increased vata dosha.

Discussion on mode of action of Nasya :

The drug administered through the nostrils reaches the *srungataka marma*, then spreads in *murda, netra, karna, kantha* and *siramukha* scratches the morbidly attached *doshas* and expels them out[14].

Administration of *nasya* during menstrual period causes *yoni shoshana*, It means that *nasya* is having the capacity to reach up to the *yoni bhaga*[15].

We are administrating *nasya* in the follicular phase. In this phase the pituitary gland secretes a hormone that stimulates the egg cells in the ovaries to grow. One of these egg cells begins to mature in a sac-like-structure called follicle. It takes 13 days for the egg cell to reach maturity. While the egg cell matures, its follicle secretes a hormone that stimulates the uterus to develop a lining of blood vessels and soft tissue called endometrium the stimulation produced by the *nasya* acts on the pituitary gland and regulates the hormonal changes which are taking place in the follicular phase [16].

Nasya acts on the Neurological pathway, stimulates the olfactory nerve that in turn sti-

mulates the middle cephalic fossa and portion of amygdale. Further it acts on the Hypothalamus which is the processing centre of brain. The stimulation produced by the hypothalamus acts on the Anterior and posterior pituitary further regulates the hormonal production.

Urdwa jatru is the *kapha sthana* so the endocrinal disorders which produce the infertility are may be produced by *kaphavarana* or *vata vridhdi kshayavasta*. If *Kaphavarana* is there *Shodhana nasya*, In *Vata vridhdi avastha Shamana nasya* and in *vata kshayavasta Brimhana nasya* is indicated.

Always the *doshas* should be removed from the nearest root, Hypothalamus, pituitary, thyroid gland these are *urdvajatrugata*, so to remove the morbid *dosha* nose is the nearest root and the *nasya* is the best treatment modality. [17]

Discussion on HPO axis:

The gonadotropin hormones FSH and LH are secreted by the pituitary gland. FSH is necessary for the development of the immature ovum (Primordial follicle in the ovary), and LH triggers ovulation [18]. The secretion of FSH and LH from the pituitary gland is under the control of Gonadotropin releasing hormone from the Hypothalamus [19], and the hypothalamus in turn is controlled by the levels of the ovarian steroid hormones oestrogen and progesterone in the blood by means a feedback mechanism [20]. When we administer the *nasya* that will stimulates the Hypothalamus and Pituitary to release the hormone that in turn stimulates the ovary.

CONCLUSION

Nasya is the best treatment modality to treat the infertility which is mainly produced by the hormonal imbalance.

Further scope for the study:

- Study with larger sample size.
- Clinical trials to see the effect of *Pratimarsha nasya* on ovulation, when it is used as a part of *dinacharya*.

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