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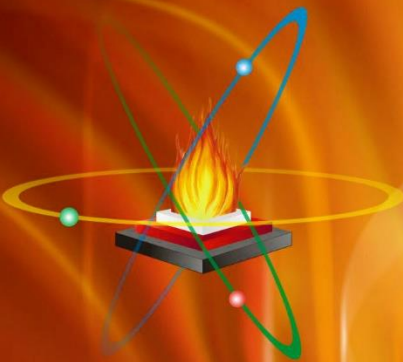
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Research Article

Management of Symptoms Associated with Obsessive-Compulsive Disorder (OCD) and PolyCystic Ovarian Disease (PCOD) through an Integrated Approach including Yagya Therapy

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Abstract. *Background:* Obsessive-Compulsive Disorder (OCD) is a disabling mental disorder, characterized by continuous flow of unwanted mental events (thoughts, urges, etc.), accompanied by repetitive physical or mental acts to allay the fear caused by those events. Poly Cystic Ovarian Disease (PCOD) is a common endocrine disorder, characterized by various symptoms such as irregular menses, hyperinsulinemia, obesity, infertility, hirsutism, etc. Although several treatment methodologies have been employed for the treatment of these disorders, side-effect free, long-term, and simultaneous management of these diseases is still a challenge. *Purpose:* As per the classical texts of Ayurveda, the disease that resembles the symptoms associated with OCD, is Atatvaabhinivesha; It is caused by Dhi Vibhransh, i.e. vitiation of the Dhi element of Buddhi (intellect), and is characterized by the vitiation of one or more of the three Doshas, i.e. Vata, Pitta and Kapha. As per the classical texts of Ayurveda, the disease that resembles the symptoms associated with PCOD, is characterized by the vitiation of Kapha Dosha, along with Vata Dushti (vitiation). Hence, treatments that balance these Doshas, as well as have Rasayan (provide rejuvenation and nourishment to the body tissues) properties, are recommended for the management of the symptoms associated with these diseases. Yagya Therapy provides pulmonary inhalation of medicinal smoke of multiple herbs (generated through oblation in fire along with chanting of Vedic hymns), which provide therapeutic benefits. The Vedic hymns also contribute to the positive restructuring of the psyche of the patient.

Methods: A case report about a female patient, who was suffering from symptoms associated with both OCD (since past 19 years) and PCOD, as well as other associated ailments, has been presented in this article. The patient was prescribed an integrated approach including Yagya Therapy (using an appropriate herbal formulation - hawan samagri), and some other Ayurvedic treatments like decoction of medicinal herbs, Ayurvedic medicines, dietary recommendations, etc. *Results:* Before starting the integrated approach including the Yagya Therapy (prescribed in the present study), the patient had several complaints including irregular menses, hirsutism, hypertension, hyperinsulinemia, high serum testosterone level, sleeplessness, emotional weakness, depressive and obsessive thoughts, mood swings; after taking the integrated approach including Yagya Therapy, the complaint of PCOD was completely resolved, and the menses had become regular; complaint of vomiting was completely resolved, and blood pressure remains normal now; there was about 75% relief in the complaints of sleeplessness, loss of appetite and weakness; and there was notable relief in most of the other complaints as well. Overall, there was definite improvement in the condition of the patient. *Conclusion:* The integrated approach including Yagya Therapy showed encouraging results with regards to the simultaneous management of the symptoms associated with OCD and PCOD, as well as other associated ailments.

Keywords. Obsessive-Compulsive Disorder, Poly Cystic Ovarian Disease, Yagya Therapy, Ayurveda, Pulmonary Inhalation, Herbal Medicines

Introduction

Obsessive-Compulsive Disorder (OCD) is a disabling mental disorder, characterized by continuous flow of unwanted mental events (thoughts, urges, etc.), accompanied by repetitive physical or mental acts to allay the fear caused by those events (1). Poly Cystic Ovarian Disease (PCOD) is a common endocrine disorder, characterized by various symptoms such as irregular menses, hyperinsulinemia, obesity, infertility, hirsutism, etc. (2) Although several treatment methodologies have been employed for the treatment of OCD and PCOD (1,2), side-effect free, long-term management of these diseases is still a challenge. Also, simultaneous management of these disorders, further enhances the difficulty. Hence, there is a definite need to look for effective therapies for patients suffering from OCD and PCOD, as well as other associated ailments.

According to Ayurveda, a healthy human body is supposed to have a relatively stable equilibrium (congenial homeostasis) of Dosha (psycho-biological rhythm - Vata, Pitta, Kapha), Dhatu (body tissues) and Mala (excreta) (3-6); Acharya Sushruta defines health as an equilibrium of Dosha (psycho-biological rhythm), Agni (digestion and metabolism), Dhatu (body tissues), Malakriya (excretory function), as well as the well being of soul, senses and mind (3,6). Imbalance in this equilibrium leads to disease, and the aim of the therapy is to restore this balance. Treatment of disease involves procedures for purifying the biological system by removing the vitiated elements from the entire body, and thus causing disease prevention, as well as health promotion (3-7).

As per the classical texts of Ayurveda, the disease that resembles the symptoms associated with OCD, is *Atatvaabhinivesha* (Ch. Sh. 1/99) (Ch. Su. 19/8) (Ch. Chi. 10/60) (4,5,8), wherein, a person thinks what should not be thought, as well as assumes useful things to be harmful, and vice versa; thus, the basic symptom of this disease is doing *Hatha* (obsession) for *Atatva* (non-existent). It is caused by *Dhi Vibhransh*, i.e. vitiation of the *Dhi* element of *Buddhi* (intellect) (Ch. Sh. 1/99) (4,5), and is

characterized by the vitiation of one or more of the three *Doshas*, i.e. *Vata*, *Pitta* and *Kapha*; hence, treatments that balance these *Doshas*, as well as have *Rasayan* (provide rejuvenation and nourishment to the body tissues) properties, are recommended for the management of the symptoms associated with this disease (4,5). As per the classical texts of Ayurveda, the disease that resembles the symptoms associated with PCOD, is characterized by the vitiation of *Kapha* *Dosha*, along with *Vata* *Dushti* (vitiation), which in turn causes *Avarodha* (blockage) or *Avarana* (masking) in the *Artavavaha* *Srotas* (2,3); hence, treatments that balance these *Doshas*, are recommended for the management of the symptoms associated with this disease.

Several herbal medicines can be useful in the management of symptoms associated with OCD; these include: *Withania somnifera* (9), *Crocus sativus* (Saffron) (10), *Centella asiatica* (*Brahmi*) (3), *Convolvulus pluricaulis* (*Shankhapushpi*) (3), etc. Several herbal medicines can be useful in the management of symptoms associated with PCOD; these include: *Shatavari* (*Asparagus racemosus*) (11), *Shatapushpa* (*Peucedanum graveolens*) (11), *Guduchi* (*Tinospora cordifolia*) (11), *Atibala* (*Abutilon indicum*) (11), *Krishna Jeeraka* (*Nigella sativa*) (11), *Sahachara* (*Barleria prionitis*) (11), *Trigonella foenum-graecum* (12), *Sphaeranthus indicus* (12), *Nardostachys jatamansi* (12), *Symplocos racemosa* (12), *Moringa oleifera* (13), *Tetragonia tetragonioides* (Pall.) Kuntze (*Sea Spinach*) (14), etc.

Yagya is an ancient Indian therapeutic procedure (15-28), which is aimed at providing all round well-being of an individual. In the process of *Yagya*, coarse powder (*hawan samagri*) made up of dry plant-medicines, as well as selected nutritious and aromatic substances, undergoes transformation into vapor phase, sublimation or decomposition by gradual heating; these phytomedicines spread along with the volatile substances and gases, released by the slow and controlled combustion process in *Yagya* fire (19). Medicinal phytochemicals, vapors of some essential oils and certain other volatile

healthy constituents released in this process impart therapeutic advantage (16,19).

In addition, frequent oral and nasal inhalation of phytomedicines in medicinal fumes, generated in Yagya, takes place because of the rhythmic deep breathing exercise (pranayama) and chanting of certain Vedic hymns by the subjects (patients) throughout the duration of the Yagya, which contributes to the efficient pulmonary administration of phytomedicines (16,19). Thus, Yagya is a promising non-conventional method of pulmonary drug administration for plant medicines (15-28).

Vedas recommend performing of Hawan (Yagya) every day, morning and evening, to attain spiritual refinement, mental peace, purification of the mind and environment, as well as treatment of various diseases (22).

The Vedic hymns (Mantras) chanted during Yagya are intense spiritual prayers to the Almighty for the well being of both the self, as well as the entire cosmos. During the chanting of these Mantras, the participants are supposed to continuously meditate on their meaning; thus, this chanting creates a continuous process of meditation and contemplation, which contributes to the positive restructuring of the psyche of the participants (22,29,30).

Since past several years, the Department of Ayurveda and Holistic Health (DAH) at Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand has been practicing Yagyopathy, wherein different herbal preparations of Ayurvedic plant medicines (hawan samagri) have been made for various diseases such as those of digestive system (cholera, dysentery, etc.), fevers (malaria, viral, etc.), respiratory system (cold/cough, asthma, tuberculosis, etc.), diabetes, obesity, joint pain, insomnia, cancer, etc., as well as various psychological ailments (21,24). A large number of patients suffering from these diseases have either taken Yagya Therapy at this Department, or taken the disease specific hawan samagri to their home and conducted yagya themselves. Pre and Post Clinical,

Pathological and Biochemistry investigations, as well as verbal and written testimonials from these patients indicate encouraging outcomes of Yagyopathy with regards to the treatment of these diseases.

Yagyopathy, with disease-specific herbal preparation, has been shown to be an effective therapy for the treatment of various other physiological and psychological ailments. Raghuvanshi et al. (2009) (19) administered Yagyopathy to 15 patients of pulmonary tuberculosis in the age group of 15-60 years for 35 to 75 days using an anti-tubercular herbal preparation of Ayurvedic plant medicines. The effects were tested by sequential readings on different clinical physiological, microbiological, hematological, biochemical and pathological parameters, and the results showed encouraging healing possibilities of Yagyopathy for pulmonary tuberculosis (15-17,19,21). Batham et al. (2018) (25) showed that Yagya Therapy, as supportive care, can prevent the occurrence of epileptic seizures. Verma et al. (2018) (26) demonstrated the effectiveness of Yagya Therapy in the treatment of Sub-clinical hypothyroidism (SCH). Mishra et al. (2018) (27) showed that Yagya Therapy, as supportive care, improved quality of life in cancer patients.

Looking at the multiple advantages of Yagya Therapy, which include positive restructuring of the psyche of the participants by the chanting of Vedic hymns (Mantras) and meditating on their meaning, exposure to medicinal-fumes of multiple herbs, as well as their efficient pulmonary administration, Yagya Therapy can be an effective treatment methodology for the management of symptoms associated with OCD and PCOD.

A case report about a female patient, who was suffering from the symptoms associated with both OCD and PCOD, as well as other associated ailments including hyperinsulinemia, hirsutism, hypertension, is being presented here. She visited the Out Patient Section of the Department of Ayurveda and Holistic Health at Dev Sanskriti

Vishwavidyalaya, Haridwar for consultancy. In view of the above discussion about the management of symptoms associated with OCD and PCOD, and other associated ailments, an integrated approach including Yagya Therapy (using an appropriate herbal formulation - hawan samagri), and some other Ayurvedic treatments like decoction of medicinal herbs, Ayurvedic medicines, dietary recommendations, etc. was prescribed to the patient, and the effectiveness of the same is being presented in this article.

Methods

In the present study, an integrated approach including Yagya Therapy (using an appropriate herbal formulation), and some other Ayurvedic treatments like decoction of medicinal herbs, Ayurvedic medicines, dietary restrictions, lifestyle modifications, etc., was prescribed to a female patient suffering from symptoms associated with OCD and PCOD, as well as other associated ailments.

2.1 Case Report

A 40 year old female patient (height - 158.2 cm ; weight - 82 kg) came to the Out Patient Section of the Department of Ayurveda and Holistic Health (DAHH) at Dev Sanskriti Vishwavidyalaya, Haridwar, in September 2017 for consultancy. The medical history of the patient based on the details provided by the patient, as well as further discussion with the doctor, is as follows:

- Patient had been suffering from OCD since past 19 years.
- Patient was also suffering from PCOD

Patient was also suffering from several other ailments including: Irregular menses, Hirsutism (facial hair were present), Hypertension, Hyperinsulinemia, High serum testosterone level, Emotional weakness, with feeling of insecurity, Negative thinking, with irritation, with angry nature, with anxiety, Depressive thoughts, Presence of mood swings, Obsessive thoughts, Sleeplessness.

The patient had no past history of Diabetes Mellitus, Asthma, Ischemic Heart Disease, Constipation. She had been taking allopathic medication including Metformin tablet, Calcium tablet, Vitamin-D, etc.

Based on the above mentioned medical history and further discussion with the doctor, the current diagnosis for the patient included symptoms associated with OCD, with PCOD, with Hypertension, with Hirsutism, as well as other associated ailments.

2.2 Therapeutic Intervention

As mentioned above, the patient was suffering from symptoms associated with OCD and PCOD, as well as other associated ailments. Hence, an integrated approach including Yagya Therapy (using an appropriate herbal formulation), and some other Ayurvedic treatments like decoction of medicinal herbs, Ayurvedic medicines, dietary recommendations, lifestyle modifications, etc., was prescribed for the patient, with the understanding that the patient had come to the Out Patient Section, and the patient would be taking these treatments at her home.

The prescribed therapeutic interventions were as follows:

2.2.1 Yagya Therapy with Manograsit Badhyata Nivarak (for treating OCD) and Anidra Nashak (for treating Sleeplessness) hawan samagri (herbal mixture)

Patient was advised to follow the standard protocol of Yagya at home. The detailed protocol has been described in earlier publications (24,28,31,32). Briefly, the procedure included (24,31,32):

- Doing Shatkarma for both internal and external purification (Pavitrikaran, Achaman, Shikhavandan, Nyasa - i.e. spiritual practices for purification), Prithvi Pujan (prayers to Mother Earth), Chandan-dharan (applying sandalwood paste or roli-red powder on forehead), Guru-avahan (invoking the spiritual guide)

- Followed by - 24 oblations of the Manograsit Badhyata Nivarak hawan samagri (in the morning), and 24 oblations of the Manograsit Badhyata Nivarak hawan samagri mixed with Anidra Nashak hawan samagri (in the evening), in the fire (made from dried wood of Palash tree (*Butea monosperma*)), in small hawan-kunda made of copper, along with the chanting of Gayatri Mantra - specifically Chandra Gayatri Mantra, i.e. Om Bhoor Bhuvah Swah, Ksheer Putraaya Vidmahe, Amrit Tatvaaya Dheemahi, Tannah Chandrah Prachodayaat (21,24,28), with the aim of providing peace and tranquility to the mind.
- Followed by - Pranayama, while sitting near the Yagya

Patient was advised to use hawan samagri prescribed by Department of Ayurveda and Holistic Health (DAHH), Dev Sanskriti Vishwavidyalaya, Haridwar, and ghee (clarified butter made from indigenous cow's milk).

Since past several years, DAHH has been prescribing Yagya Therapy (Yagyopathy), wherein different herbal preparations of Ayurvedic plant medicines (hawan samagri) have been made in-house for various diseases. With regards to the present study, DAHH prescribed a Manograsit Badhyata Nivarak hawan samagri, which consists of 14 herbs, and Anidra Nashak hawan samagri, which consists of 8 herbs, and are based on the formulations for the same given in reference (24). No metal was used in the herbal preparation. All ingredients were well identified by taxonomist (33), were non-toxic, and could be useful in the treatment of the symptoms associated with OCD and PCOD, as well as other associated ailments (1,24).

Along with the Manograsit Badhyata Nivarak and Anidra Nashak hawan samagri, patient was also prescribed a common purpose immunity-boosting hawan samagri, based on the formulation for the same given in reference (21,24). For the 24 oblations in the morning, Manograsit Badhyata Nivarak

hawan samagri and common purpose hawan samagri had to be mixed in 3:1 ratio (i.e. 30 gm and 10 gm, respectively); 30 gm cow ghee had to be added to this herbal mixture; and then 24 oblations, along with chanting of Chandra Gayatri Mantra, had to be made in the fire with this mixture. For the 24 oblations in the evening, Manograsit Badhyata Nivarak hawan samagri, Anidra Nashak hawan samagri and common purpose hawan samagri had to be mixed in 1.5:1.5:1 ratio (i.e. 15 gm, 15 gm and 10 gm, respectively); 30 gm cow ghee had to be added to this herbal mixture; and then 24 oblations, along with chanting of Chandra Gayatri Mantra, had to be made in the fire with this mixture.

It was advised to do Yagya twice daily at the time of Sunrise and Sunset. The patient was advised to do Yagya Therapy for 3 months.

2.2.2 Drinking decoction of Manograsit Badhyata Nivarak hawan samagri (herbal mixture)

Patient was advised to drink the decoction of Manograsit Badhyata Nivarak hawan samagri, wherein 20 gm of herbal mixture had to be mixed in 4.5 cups of water; kept overnight; boiled the next morning till 1.5 cup of water was remaining; this had to be divided in two equal parts, and taken empty stomach two times during the day, i.e. in morning and evening.

2.2.3 Ayurvedic medicines

- Anidra Nashak Churna (fine ground powder of Anidra Nashak hawan samagri - useful in sleeplessness) - half tablespoon had to be taken with honey, twice daily, i.e. in morning and evening
- Medhavardhak Churna (herbal mixture for memory enhancement) - half tablespoon of this herbal mixture had to be taken twice daily, i.e. in morning and evening
- Punarnavarishta (Ayurvedic medicine for kidney disorders, etc.) - 10 ml had to be take with water, twice daily
- Arogyavardhini Vati (polyherbal and herbomineral formulation for liver disorders, etc.) - 2 tablets had to be taken after meal, twice

daily

2.2.4 Dietary advice

It was advised to keep fast on every Poornima (full moon night) (for mental peace)

2.2.5 Other recommendations

It was advised to write Gayatri Mantra, and do Swadhyay (read and contemplate upon spiritual / motivational literature), Meditation, and Sookshma Vyayam (joint loosening exercise) (for providing peace and tranquility to the mind)

Results

In the present case study, the outcomes were assessed in a qualitative (subjective) manner based on the patient's experiential feedback. After the initial visit of the patient in September 2017, the patient continued with the prescribed integrated approach including Yagya Therapy at her home. A followup was taken from the patient in March 2019, about the present condition of the patient. The feedback provided by the patient is as follows:

- The patient had been doing Yagya once daily in the morning
- She had been doing Pranayama for 5 to 10 minutes daily - she used to be in the room, in which Yagya was done, for 35-40 minutes
- She had been drinking the decoction of the prescribed hawan samagri once daily, in the morning

The patient had experienced notable relief in various symptoms, and associated ailments, as described below:

- Before starting the integrated approach including the Yagya Therapy (prescribed in the present study), the patient had complaint of PCOD and irregular menses; however, at the time of followup, PCOD was completely resolved, and the menses had become regular
- Earlier, the patient had complaint of Sleeplessness; at the time of followup this complaint was about 75% resolved - she could now sleep for 7 to 8 hours
- Earlier, the patient had complaint of

Hypertension; at the time of followup, her Blood Pressure remains normal now

- Earlier, the patient had complaint of vomiting; at the time of followup this complaint was completely resolved
- Earlier, the patient had complaint of loss of appetite; at the time of followup this complaint was about 75% resolved
- Earlier, the patient had complaint of weakness; at the time of followup this complaint was about 75% resolved
- Earlier, the patient had complaint of stress; at the time of followup this complaint was about 50% resolved
- Earlier, the patient had complaint of Hirsutism, facial hair; at the time of followup there was reduction in Hirsutism, facial hair
- Other complaints in which the patient experienced relief included less mood swings, less flow of unwanted thoughts, increase in confidence, less feeling of insecurity, has become emotionally strong, anger has been reduced
- Earlier, the patient had complaint of depression; at the time of followup this complaint was about 25% resolved - the patient especially felt bad before coming of menses
- Overall, there was definite improvement in the condition of the patient

Discussion

The present study illustrates the potential of an integrated approach including Yagya Therapy for the management of symptoms associated with OCD and PCOD, as well as other associated ailments.

According to Ayurveda, a healthy human body is supposed to have a relatively stable equilibrium (congenial homeostasis) of Dosha (psycho-biological rhythm - Vata, Pitta, Kapha), Dhatu (body tissues) and Mala (excreta) (3-6); Acharya Sushruta defines health as an equilibrium of Dosha (psycho-biological rhythm), Agni (digestion and metabolism), Dhatu (body tissues), Malakriya (excretory function), as well as the well being of soul, senses and mind (3,6). Imbalance in this

equilibrium leads to disease, and the aim of the therapy is to restore this balance. Treatment of disease involves procedures for purifying the biological system by removing the vitiated elements from the entire body, and thus causing disease prevention, as well as health promotion (3-7).

As per the classical texts of Ayurveda, the disease that resembles the symptoms associated with OCD, is *Atatvaabhinivesha* (Ch. Sh. 1/99) (Ch. Su. 19/8) (Ch. Chi. 10/60) (4,5,8), wherein, a person thinks what should not be thought, as well as assumes useful things to be harmful, and vice versa; thus, the basic symptom of this disease is doing Hatha (obsession) for *Atatva* (non-existent). It is caused by *Dhi Vibhransh*, i.e. vitiation of the *Dhi* element of *Buddhi* (intellect) (Ch. Sh. 1/99) (4,5), and is characterized by the vitiation of one or more of the three *Doshas*, i.e. *Vata*, *Pitta* and *Kapha*; hence, treatments that balance these *Doshas*, as well as have *Rasayan* (provide rejuvenation and nourishment to the body tissues) properties, are recommended for the management of the symptoms associated with this disease (4,5). As per the classical texts of Ayurveda, the disease that resembles the symptoms associated with *PCOD*, is characterized by the vitiation of *Kapha Dosh*, along with *Vata Dushti* (vitiation), which in turn causes *Avarodha* (blockage) or *Avarana* (masking) in the *Artavavaha Srotas* (2,3); hence, treatments that balance these *Doshas*, are recommended for the management of the symptoms associated with this disease.

In Yagya Therapy, the *hawan samagri* (mixture of medicinal herbs) contained herbs, which were chosen based on careful review of Ayurvedic pharmacology, modern pharmacology, and scriptural indications. The beneficial properties of some of the herbs with regards to the management of symptoms associated with *OCD* and *PCOD*, as well as other associated ailments, are as follows:

- *Brahmi* (*Centella asiatica*), *Giloy* (*Tinospora Cordifolia*) have *Rasayan* (provide rejuvenation and nourishment to the body tissues) properties (3,33,34)
- *Shankhapushpi* (*Convolvulus pluricaulis*),

Brahmi, *Jatamansi* (*Nardostachys Jatamansi*) have *Balya* (provide strength) and *Medhya* (nervine tonic) properties (3,33,34)

- *Giloy* has *Tridoshaghna* (pacifies all the three *Doshas*) properties (33,34)
- *Vach* (*kadavi* - bitter) (*Acorus Calamus*) has *Kapha-niharak* (removes *Kapha*) properties (33,34)
- *Bharangi* (*Clerodendrum Serratum*) has *Vataghna* (*Vata* pacifying) properties (33,34)
- *Kooth* (*meetha* - sweet) (*Saussurea lapa*), *Pippalimoola* (*Piper longum*) have *Deepan Pachan* properties (33,34); *Deepan Pachan* drugs are administered for enhancing the digestive fire (35,36) and digestion of the *ama dosha* (undigested toxins of the body that are responsible for the blockage of micro-channels).

Thus, the ingredients of *hawan samagri* have properties of balancing the above mentioned *Doshas*, as well as *Rasayan*, *Balya* and *Medhya* properties, which help in the management of the symptoms associated with *OCD* and *PCOD*, and other associated ailments, as well as provide rejuvenation and nourishment to the body tissues. Their vapors can be useful in the management of symptoms associated with *OCD* and *PCOD*, as well as other associated ailments (24,33,34).

In Yagya Therapy, *ghee* is essentially added to *hawan samagri*. According to Ayurveda, *ghee* enhances the digestive fire (*agni*), and nourishes *ojas* (the subtle essence of the body tissues - *dhatu*) (37). It helps in memory enhancement and strengthening of the nervous system (37). It also has *Vata* and *Pitta* pacifying properties (37). Because of its *yogavahi guna*, it has the property that without losing its own qualities, it can incorporate the qualities of the herbal medicines added to it; furthermore, it transports the same to deeper body tissues through its lipophilic action (37,38). According to modern research findings, lipid nanoparticles have been shown to enhance drug delivery through the nasal route (17,39).

In the process of Yagya, hawan samagri made up of dry plant-medicines, as well as selected nutritious and aromatic substances, undergoes transformation into vapor phase, sublimation or decomposition by gradual heating; these phytomedicines spread along with the volatile substances and gases, released by the slow and controlled combustion process in Yagya fire (19). Medicinal phytochemicals, vapors of some essential oils and certain other volatile healthy constituents released in this process impart therapeutic advantage (16,19).

In addition, frequent oral and nasal inhalation of phytomedicines in medicinal-fumes, generated in Yagya, takes place because of the rhythmic deep breathing exercise (pranayama) and chanting of certain Vedic hymns by the subjects (patients) throughout the duration of the Yagya, which contributes to the efficient pulmonary administration of phytomedicines (16,19). Thus, Yagya is a promising non-conventional method of pulmonary drug administration for plant medicines (15-28).

Administration of multi-herbs through oral administration can have limitations such as first-pass metabolism (27). In case of nasal drug administration, absorption takes place from the nasal cavity into the systemic circulation, and the first-pass metabolism is avoided (27,39). Furthermore, the blood-brain barrier is also avoided, and the medicinal drugs can be transported directly from the nasal cavity into the brain (39). Thus, nasal administration of herbal medicines through Yagya Therapy may be considered as an important aspect with regards to the therapeutic advantage observed in the present study.

The process of pulmonary drug administration of plant medicines during Yagya is similar to that during Nasya, which is a common purificatory therapeutic procedure in the Panchakarma Therapy of Ayurveda, wherein herbal medicines are administered through the nasal route, in different forms including oil, powder and vapors (4,5). Nasya primarily affects the urdhvajatrugata pradesha (supra-clavicular region) (40,41). According to

Acharya Vagbhatta, nose is one of the most convenient routes to convey medicinal effects to the cranial cavity (40). According to Acharya Charaka, nasya drug usually acts through absorption by the Shringataka marma (a vital spot in the head region situated at the site of the union of the nerves, supplying to the nose, ears, eyes, and tongue); after absorption, the medicine acts on the diseases of the respiratory system, shoulder, neck, etc., and the vitiated Doshas are expelled from the head region (40). Thus, the administered medicine moves up to the Shringataka marma, spreads all over the head, channels of eyes, ears, nose and throat, and removes vitiated Doshas from there (40,41).

The Vedic hymns (Mantras) chanted during Yagya are intense spiritual prayers to the Almighty for the well being of both the self, as well as the entire cosmos. During the chanting of these Mantras, the participants are supposed to continuously meditate on their meaning; thus, this chanting creates a continuous process of meditation and contemplation, which contributes to the positive restructuring of the psyche of the participants (22,29,30). The chanting of Gayatri Mantra causes beneficial effects with regards to various physical and mental conditions like attention, concentration, etc. (22,29,42-45)

During Yagya, the patient has to sit near the Yagya fire for a specified amount of time; this way, the patient experiences the bright light and heat of the fire, which have their own therapeutic advantages such as relief from depression caused by bright light (46,47), sudation (swedan) caused by heat, etc.; according to Ayurveda, swedan (sudation) has actions like stambhaghna (relieves stiffness), swedakaraka (creates perspiration), and, gauravaghna (cures heaviness) (48).

Yagya has also been found useful in purifying the indoor environment. Nautiyal et al. (2007) (49) demonstrated 94% reduction of bacterial counts after yagya in a closed room; several pathogenic bacteria were found absent in the open room even after 30 days. Saxena (2006) (50) (did experiments in collaboration with Central Pollution Control Board,

Delhi) studied the effect of yagya on air microflora, bacteria and pathogens; in indoor experiments, she found significant reduction in pathogens, bacteria and microflora, even 2-3 days after yagya. This environment purifying effect of Yagya must also have contributed to the creation of a healthy environment in patient's home, and the observance of the encouraging results seen in the present study.

Patient took the decoction of the prescribed hawan samagri, once daily, in the morning. As described above, the ingredients of the Manograsit Badhyata Nivarak hawan samagri have properties of balancing the above mentioned Doshas, as well as Rasayan, Balya and Medhya properties, which help in the management of the symptoms associated with OCD and PCOD, and other associated ailments, as well as provide rejuvenation and nourishment to the body tissues. Thus, the decoction of the hawan samagri must have provided these therapeutic benefits as well.

Patient was advised to do Pranayama, while sitting near the Yagya. The patient did Pranayama for about 5-10 minutes daily, as well as, sat in the room, where Yagya was done, for about 35-40 minutes; this must have resulted in a greater intake of the medicinal fumes generated during Yagya, and hence an enhancement in the therapeutic benefits. Furthermore, Pranayama is known to have several other therapeutic benefits that would have contributed to the beneficial results observed in the present study. Anulom Vilom Pranayama can cause enhancement of the ventilation and oxygenation of the paranasal sinuses (51). Pranayama / Alternate Nostril Breathing significantly influences the parasympathetic nervous system (52). Slow yogic breathing technique produces beneficial effect on cardiovascular and autonomic variables (53). Slow Pranayama improves pulmonary function, and results in relaxed state of mind, better concentration, and improved lung ventilation (54).

The ayurvedic medicines prescribed to the patient had various beneficial medicinal properties with regards to sleeplessness, memory enhancement,

kidney and liver disorders, etc., which are useful in the management of symptoms associated with OCD and PCOD, as well as other associated ailments.

The dietary recommendations included various things that provide peace and tranquility to the mind, and are useful in the management of symptoms associated with OCD and PCOD, as well as other associated ailments.

It is noteworthy that the present study was done in OPD (Out-Patient Department) setting, wherein the patient was prescribed the therapy, and was required to do Yagya and follow other therapeutic procedures at her home. Such a setting has obvious limitations with regards to following the prescribed procedure and dietary recommendations, as well as taking medications, etc.; however, the patient still reported notable benefit. Thus, the present study shows encouraging results with regards to the effectiveness of the integrated approach including Yagya Therapy in the simultaneous management of symptoms associated with OCD and PCOD, as well as other associated ailments. There is definitely a need for further in-depth quantitative study to establish the mode of operation of this integrated approach in the light of modern scientific understanding.

Conclusion

A case report about a female patient, who was suffering from symptoms associated with both OCD (since past 19 years) and PCOD, as well as other associated ailments, has been presented in this article. The patient was prescribed an integrated approach including Yagya Therapy (using an appropriate herbal formulation - hawan samagri), and some other Ayurvedic treatments like decoction of medicinal herbs, Ayurvedic medicines, dietary recommendations, etc.

Before starting the integrated approach including the Yagya Therapy (prescribed in the present study), the patient had several complaints including irregular menses, hirsutism, hypertension, hyperinsulinemia, high serum testosterone level, sleeplessness, emotional weakness, depressive and obsessive

thoughts, mood swings; after taking the integrated approach including Yagya Therapy, the complaint of PCOD was completely resolved, and the menses had become regular; complaint of vomiting was completely resolved, and blood pressure remains normal now; there was about 75% relief in the complaints of sleeplessness, loss of appetite and weakness; and there was notable relief in most of the other complaints as well. Overall, there was definite improvement in the condition of the patient. Thus the present study shows encouraging results with regards to the simultaneous management of the symptoms associated with OCD and PCOD, as well as other associated ailments.

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Compliance with ethical standards

Informed consent was obtained from the patient.

Conflict of interest

The authors declare that they have no conflict of interest.

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References

1. Rupp C, Jurgens C, Doebler P, Andor F, Buhlmann U. A randomized waitlist-controlled trial comparing detached

mindfulness and cognitive restructuring in obsessive-compulsive disorder. *PLoS ONE*. 2019;14(3):e0213895. (<https://doi.org/10.1371/journal.pone.0213895>)

2. Patel KD, Dei L, Donga SB, Anand N. Effect of Shatapushpa Taila Matra Basti and Pathadi Kwatha on Poly Cystic Ovarian Disease. *Ayu*. 2012;33(2):243–246.

3. Murthy KRS. *Susruta Samhita - Vol. I, II, III*. Varanasi, Uttar Pradesh, India: Chaukhamba Orientalia; 2008.

4. Shastri K, Chaturvedi GN. *Charak Samhita – Elaborated Vidyotini Hindi Commentary (Hindi). Part-I*. Varanasi, Uttar Pradesh, India: Chaukhamba Bharati Academy; 2001.

5. Shastri K, Chaturvedi GN. *Charak Samhita – Elaborated Vidyotini Hindi Commentary (Hindi). Part-II*. Varanasi, Uttar Pradesh, India: Chaukhamba Bharati Academy; 2003.

6. Kadlimatti SM, Maheshwari KS, Chandola HM. Critical Analysis of the Concept of Asthi Kshaya vis-a-vis Osteoporosis. *Ayu* 2009;30(4):447-458.

7. Kumar S, Debnath P, Banerjee S, Raj-GR A, Rao PN. Clinical investigations on the ayurvedic management of Allergic Rhinitis (Vataja pratishyaya) by Pratimarsha nasyaas nasal drug delivery system. *Exploratory Animal and Medical Research*. 2014;4(2):194-205.

8. Singh RH. *Ayurvediya Nidana-Chikitsa Ke Siddhanta - Volume II*. Varanasi, Uttar Pradesh, India: Chaukhamba Amarabharati Prakashan; 1999.

9. Kaurav BPS, Wanjari MM, Chandekar A, Chauhan NS, Upmanyu N. Influence of *Withania somnifera* on obsessive compulsive disorder in mice. *Asian Pacific Journal of Tropical Medicine*. 2012;5(5):380-384.

10. Esalatmanesh S, Biuseh M, Noorbala AA, Mostafavi S-A, Rezaei F, Mesgarpour B, Mohammadinejad P, Akhondzadeh S. Treatment of Mild to Moderate Obsessive-Compulsive Disorder: A Double Blind Randomized Clinical Trial. *Iranian Journal of Psychiatry*. 2017;12(3):154-162

11. Siriwardene SAD, Karunathilaka LPA, Kodituwakku ND, Karunarathne YAUD. Clinical efficacy of Ayurveda treatment regimen on Subfertility with Poly Cystic Ovarian Syndrome (PCOS). *Ayu*. 2010;31(1):24–27.

12. Azeemuddin M, Anturlikar SD, Onkaramurthy M, Baig MR, Ashok BK, Rao RP, Rafiq M, Rangesh P. Effect of "DXB-2030," a Polyherbal Formulation, on Experimental Polycystic Ovary Syndrome Associated with Hyperandrogenism. *Advances in Pharmacological Sciences*. 2019; Article ID - 8272850:7 pages. (<https://doi.org/10.1155/2019/8272850>)
13. Amelia D, Santoso B, Purwanto B, Miftahussurur M, Joewono HT, Budiono. Effects of *Moringa oleifera* on Insulin Levels and Folliculogenesis in Polycystic Ovary Syndrome Model with Insulin Resistance. *Immunology, Endocrine and Metabolic Agents in Medicinal Chemistry*. 2018;18(1):22-30.
14. Pyun B-J, Yang H, Sohn E, Yu SY, Lee D, Jung DH, Ko BS, Lee HW. *Tetragonia tetragonoides* (Pall.) Kuntze Regulates Androgen Production in a Letrozole-Induced Polycystic Ovary Syndrome Model. *Molecules*. 2018;23(5):1173. (doi:10.3390/molecules23051173)
15. Raghuvanshi M, Pandya P, Joshi RR. Yagyopathic Herbal Treatment of Pulmonary Tuberculosis Symptoms – A Clinical Trial. *Alternative and Complementary Therapies*. 2004;10(2):101-105.
16. Raghuvanshi M. Some Investigations into the Chemical and Pharmaceutical Aspects of Yagyopathy. [Ph.D. dissertation]. Shantikunj, Haridwar, Uttarakhand, India: Dev Sanskriti Vishwavidyalaya; 2006.
17. Joshi RR, Raghuvanshi M, Pandya P. Yagyopathy versus Oral and IV Drug Administration: Evaluation for Pulmonary Tuberculosis using Compartment Modeling. *Journal of Biological Systems*. 2006;14(3):463-89.
18. Pandya P. Reviving the Vedic Culture of Yagya. Shantikunj, Haridwar, Uttarakhand, India: Shri Vedmata Gayatri Trust; 2009.
19. Raghuvanshi M, Pandya P, Joshi RR. In-vitro Testing Of An Ethnobotanical Inhalation Therapy Against Pulmonary Tuberculosis. *Phytotherapy*. 2009;7:1-8.
20. Joshi RR, editor. *The Integrated Science of Yagya*. Mathura, India: Yug Nirman Yojana Vistar Trust; 2011.
21. Pandya P, editor. *Applied Science of Yagya for Health and Environment*. Revised edition. Shantikunj, Haridwar, Uttarakhand, India: Shri Vedmata Gayatri Trust (TMD); 2011
22. Brahmavarchas, editor. *Yagya - Ek Samagra Upachar Prakriya (Hindi) (Yagya - A Holistic Therapy)* Pandit Shriram Sharma Acharya Samagra Vangamaya - Volume 26. Revised edition. Mathura, Uttar Pradesh, India: Akhand Jyoti Sansthan; 2012
23. Shrivastava V. Pandit Shriram Sharma Acharya Ke Vishesh Sandarbh Me Yagya Samagra Upachar Prakriya: Ek Vishleshnatmak Adhyayan (Hindi). [Ph.D. dissertation]. Shantikunj, Haridwar, Uttarakhand, India: Dev Sanskriti Vishwavidyalaya; 2012
24. Brahmavarchas, Editor. *Yagya Chikitsa (Hindi)*. Revised edition. Shantikunj, Haridwar, Uttarakhand, India: Shri Vedmata Gayatri Trust (TMD); 2016.
25. Batham L, Choudhary L, Mishra A, Shrivastava V. Yagya therapy for epileptic seizures: a case study. *Interdisciplinary Journal of Yagya Research*, 2018;1(2):37-42.
26. Verma S, Kumar P, Mishra A, Shrivastava V. Yagya therapy for sub-clinical hypothyroidism: a case study. *Interdisciplinary Journal of Yagya Research*. 2018;1(2):31-36.
27. Mishra A, Batham L, Shrivastava V. Yagya therapy as supportive care in cancer patients improved quality of life: Case studies. *Interdisciplinary Journal of Yagya Research*. 2018;1(1):26-33.
28. Brahmavarchas (Editor). *Yagya Ka Gyan-Vigyan (Hindi)* Pandit Shriram Sharma Acharya Samagra Vangamaya - Volume 25. Mathura, India: Akhand Jyoti Sansthan; 1998.
29. Brahmavarchas, Editor. *Shabda Brahma - Nad Brahma (Hindi)*. Pandit Shriram Sharma Acharya Samagra Vangamaya - Volume 19. 2nd Edition. Mathura, India: Akhand Jyoti Sansthan; 2012.
30. Sharma S. (Pandit Shriram Sharma Acharya). *Eternity of Sound and the Science of Mantras*. Revised edition. Mathura, India: Yug Nirman Yojana Vistar Trust, Gayatri Tapobhumi; 2012. (Available from - http://literature.awgp.org/book/Eternity_of_Sound_and_The_Science_of_Mantras/v1)
31. Sharma S. (Vedmoorti Taponishtha Pt. Shriram Sharma Acharya). *Sankshipt Gayatri Hawan Vidhi (Hindi)*. Revised edition. Mathura, India: Yug Nirman Yojana Vistar Trust, Gayatri Tapobhumi; 2012.

32. Sharma S. (Pandit Shriram Sharma Acharya). Form and Spirit of Vedic Ritual Worship: Procedure of Yagya. Translated by: K. Poddar, Shambhudass. Revised edition. Mathura, India: Yug Nirman Yojana Vistar Trust, Gayatri Tapobhumi; 2011. (Available from - http://literature.awgp.org/book/procedure_of_gayatri_yagya/v1)
33. Sharma PV. Dravyaguna Vijnana - Volume II (Hindi). Varanasi, Uttar Pradesh, India: Chaukhambha Bharati Academy; 2001
34. Misra B, Vaisya R. Bhavaprakasa of Shri Bhava Misra (including Bhavaprakasa Nighantu portion) - Edited with the 'Vidyotini' Hindi Commentary, Notes and Appendix - First Part (Hindi). Varanasi, Uttar Pradesh, India: Chaukhambha Sanskrit Bhawan; 2013.
35. Dudhamal TS, Gupta SK, Bhuyan C, Singh K. The role of Apamarga Kshara in the treatment of Arsha. *Ayu* 2010;31(2):232–35.
36. Lekurwale PS, Pandey K, Yadaiah P. Management of Amavata with 'Amrita Ghrita': A clinical study. *Ayu* 2010;31(4):430–35.
37. Sharma H, Zhang X, Dwivedi C. The effect of ghee (clarified butter) on serum lipid levels and microsomal lipid peroxidation. *Ayu* 2010;31(2):134–140.
38. Roshy JC, Ilanchezhian R. Experimental evaluation of Hingusauvarchaladi Ghrita and Saptavartita Hingusauvarchaladi Ghrita with special reference to their anticonvulsant activity. *Ayu* 2010;31(4):500–03.
39. Fatouh AM, Elshafeey AH, Abdelbary A. Intranasal agomelatine solid lipid nanoparticles to enhance brain delivery: formulation, optimization and in vivo pharmacokinetics. *Drug Design, Development and Therapy* 2017;11:1815–25.
40. Das B, Ganesh RM, Mishra PK, Bhuyan. A study on Apabahuka (frozen shoulder) and its management by Laghumasha taila nasya. *Ayu* 2010;31(4):488–94.
41. Radhika C, Kumar GV, Mihirjan K. A randomized controlled clinical trial to assess the efficacy of Nasya in reducing the signs and symptoms of cervical spondylosis. *Ayu* 2012;33(1):73–77.
42. Malhotra V, Goel N, Dhar U, Garg R, Tripathi Y. Comparison of mind control techniques: An assessment of reaction times. *Bangladesh Journal of Medical Science* 2016; 15(4):596-600.
43. Pradhan B, Derle SG. Comparison of effect of Gayatri Mantra and poem chanting on digit letter substitution task. *Ancient Science of Life* 2012;32(2):89-92.
44. Sharma, S. Super Science of Gayatri. Revised Edition. Mathura-India: Yug Nirman Yojana Vistar Trust, Gayatri Tapobhumi; 2010. (Translation by - Pandya S. N., Shambhudas) (Webpage - http://literature.awgp.org/book/Super_Science_of_Gayatri/v1)
45. Sharma, S. (Vedmoorti Taponishtha Pt. Shriram Sharma Acharya). Gayatri Mahavigyan - Sanyukta Sanskaran(Hindi). Revised edition. Mathura,India: Yug Nirman Yojana Vistar Trust, Gayatri Tapobhumi; 2010. (Available from http://literature.awgp.org/book/Super_Science_of_Gayatri/v2)
46. Li X, Li X. The Antidepressant Effect of Light Therapy from Retinal Projections. *Neuroscience Bulletin* 2018;34(2):359–368..
47. Chang CH, Liu CY, Chen SJ, Tsai HC. Efficacy of light therapy on nonseasonal depression among elderly adults: a systematic review and meta-analysis. *Neuropsychiatric Disease and Treatment* 2018;14:3091–102.
48. Sharma MR., Mehta CR, Shukla DJ, Patel KB, Patel MV. Multimodal ayurvedic management for sandhigata vata (osteoarthritis of knee joint). *Ayu* 2013;34(1):49-55.
49. Nautiyal CS, Chauhan PS, Nene YL. Medicinal smoke reduces airborne bacteria. *Journal of Ethnopharmacology* 2007;114(3):446-51.
50. Saxena M. Air Quality Modelling and Non-Conventional Solutions to Environmental Problems with reference to Vedic Science [Ph.D. dissertation]. Haridwar-India: Dev Sanskriti Vishwavidyalaya; 2006.
51. Bhardwaj A, Sharma MK, Gupta M. Endoscopic evaluation of therapeutic effects of "Anuloma-Viloma Pranayama" in Pratishyaya w.s.r. to mucociliary clearance mechanism and Bernoulli's principle. *Ayu* 2013;34(4): 361–67
52. Sinha AN, Deepak D, Gusain VS. Assessment of the Effects of Pranayama/Alternate Nostril Breathing on the Parasympathetic Nervous System in Young Adults. *Journal of Clinical and Diagnostic Research* 2013;7(5):821-23.

53. Nivethitha L, Mooventhan A, Manjunath NK. Effects of Various Prāṇāyāma on Cardiovascular and Autonomic Variables. *Ancient Science of Life*. 2016;36(2):72–77.

54. Dinesh T, Gaur GS, Sharma VK, Madanmohan T, Kumar KTH, Bhavanani AB. Comparative effect of 12 weeks of slow and fast pranayama training on pulmonary function in young, healthy volunteers: A randomized controlled trial. *International Journal of Yoga*. 2015;8(1):22–26.