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Weight-loss and improvement of symptoms in women with polycystic ovarian syndrome: Learnings from an online holistic program

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Abstract

Polycystic ovarian syndrome (PCOS) is a common and distressing disorder affecting women across the globe. Overweight and obese women are more prone to this disorder and sets in a vicious pathogenesis cycle. The Sepalika 5-petal online PCOS reversal program provides a holistic approach to managing PCOS. In the second phase of this program, 84 women from the age group of 18-45 participated. More than two-thirds of the women lost an average of 3 kg weight within the first 120 days of the program. Almost half of the participants with a higher waist-to-hip ratio saw a reduction. Nearly half of the participants got a natural period. Most of the women reported an improvement in energy levels and well-being, along with a reduction in distressing symptoms. The advantage of this program was a peer-group discussion within the participants which keeps them motivated. A larger cohort of participants will give us further insights into the long-term outcomes through a holistic online PCOS reversal program.

Keywords: PCOS, Sepalika, diet, acuthery, holistic

Introduction

One of the most common endocrine disorder, polycystic ovarian syndrome (PCOS), is becoming more common due to increased awareness and the global increase in the prevalence of overweight and obesity. It is a heterogeneous disorder that has been difficult to define because there is no single abnormality or diagnostic test that defines the syndrome [1].

Many overweight or obese women have menstrual irregularity, decreased fertility or hirsutism without fulfilling diagnostic criteria for PCOS. The pathogenesis and management of these is the same as for women with PCOS. Obesity has significant effects on the clinical manifestations of PCOS such as ovulatory or menstrual disturbances tend to be more marked in the obese; Androgen levels are higher contributing to hirsutism and acanthosis nigricans [1].

Obesity is clearly a major determinant of many of the long-term consequences of PCOS including glucose intolerance and the risk of cardiovascular disease. Studies in patients with PCOS confirm that modest weight loss improves glucose tolerance, cardiovascular risk profile and reproductive function. Modest weight loss achieved in the short term may also improve some of the endocrine abnormalities associated with PCOS [1].

It is important to recognise that improved abdominal obesity and insulin sensitivity may occur without an overall change in body weight. In particular, body composition of patients who exercise regularly may change with increased lean body mass and decreased fat mass, but no overall change in weight [1,2].

Increased lean body mass (muscle) increases resting energy expenditure and may help improve hormonal and metabolic parameters in women with PCOS. While the benefits of modest weight loss have become more widely appreciated in recent years, this should not preclude us from aiming for as near normal body weight and composition as possible where this is feasible [2].

Accumulation of exercise infrequent short periods of physical activity appears to have similar influence in long-term weight loss programmes. Activity related to daily living and leisure time activity is an important determinant of body weight but not of the response to weight management programmes. A realistic approach to exercise depends on the assessment of the patient's current exercise habits, preferences regarding type of exercise, and inclination to undertake exercise [3].

Over the past few years, dietary supplementation has gained in popularity. Evidence-based

research exists related to a few popular supplements such as myo-inositol, N-acetylcysteine, vitamin D, and fish oil, which are administered for PCOS hormonal and metabolic symptoms. Supplements are not a substitute for healthy dietary and activity recommendations or medications but can be used as adjunct therapy to optimize health and support fertility [4].

There are no known curative therapies for PCOS, though anti-diabetic medications may improve many of the metabolic abnormalities, like insulin resistance, and elevated serum testosterone and total cholesterol levels [5]. Though several pharmacological therapies are available to alleviate the symptoms of PCOS and components of the associated metabolic syndrome, lifestyle modifications, including diet and exercise, have been proved most effective and should be employed as a first line intervention, and particularly so, since obesity has a central role in the pathogenesis of the disease [6]. Dietary and exercise interventions have significant impact on improving insulin sensitivity. In general, interventions that lower insulin levels and insulin resistance and lead to weight loss may prove useful for treating PCOS [5, 6].

The findings of a pilot study suggested that women with PCOS can gain control, balance, and well-being through a comprehensive treatment plan. The Sepalika five-petal program focussed at targeting the disease from its roots. The high prevalence of this disorder provides an opportunity to develop plans of management that incorporate a holistic approach rather than a conventional approach [7].

Magnet acutherapy is the science of using magnets to gently stimulate points on energy meridians to balance and heal imbalances in the human body. The acupressure therapist studies energy meridians for years to learn how to tell which ones are out of balance and which magnets need to be placed where to correct this imbalance and heal disease. Continuous research, nowadays, is making people aware of the body's self-healing capabilities. The old paradigms of treatment with modern medicine have begun to fall apart. We, no longer, believe that our bodies are machines with parts that wear down, only to be supported by drugs or replaced through surgery. Use of this natural non-invasive treatment helps us to live well in optimal health without a drop of expensive pharmaceuticals and other invasive treatments such as surgery, chemo, radio, or hormone therapies [8].

Further studies with more objective and subjective endpoints is the way forward. Thus, in continuation to the pilot study, this study aims to evaluate whether multiple interventions such as individualized diet plans, magnet acutherapy, fitness regimens, dietary supplements and herbal products of the Sepalika 5-petal programme improve PCOS symptoms, insulin resistance and hyperandrogenism.

Methods

As a second phase of the initial pilot study (Ref), ninety women in the reproductive age group from 15-45 years all over India were recruited online in the Sepalika five-petal PCOS reversal pilot program. Inclusion criteria were defined by the diagnosis of PCOS using the PCOS Symptom quiz on the Sepalika website. The symptom quiz was carefully designed by the expert panel and included questions under the subheadings of menstrual health, urogenitary health, digestive health, diet, weight issues, energy problems, acne, mental and emotional health, and other miscellaneous symptoms. The quiz was validated by the PCOS Expert Panel and Gynaecologists and fertility experts. The quiz adhered very closely to the American Androgen Excess Society parameters for PCOS. The AAES

parameters are considered by many gynaecologists to be an improvement over the Rotterdam Criteria.

Detailed medical history of all participants were obtained including ongoing and previous treatments undertaken for PCOS. Participants were asked about their main health goal and the reason for joining this program. Demographics and baseline anthropometry measurements were performed. Certain investigations such as Complete Blood Indices, Thyroid profile, Male and Female Hormonal panels, Iron studies, Vitamin D assay, lipid profile, cortisol levels, etc. were performed on a case to case basis.

The pre-specified end point of this online reversal program was objective change in weight, waist-to-hip ratio, change in energy levels and symptomatic improvement in acne, menstrual symptoms and an overall improvement in patient-reported outcomes with respect to PCOS symptoms at the end of 120 days.

Flow of the program: Women who were accepted into the programme filled an online form, listing their current symptoms, medications, diet and exercise habits. Special attention was also paid to metabolic health symptoms like energy levels, moods, digestion, etc. The first call with a member of the medical team included further questioning when needed and an explanation of the expected prognosis. Vitamins and minerals (such as iron, Vitamin D3 etc.) that were prescribed were explained fully to the patient.

Participants received the magnet-based acupressure kit via courier and learnt how to use it via video demonstrations sent to them. Most of them learnt this easily and intuitively and magnet therapists would check location accuracy of magnets regularly, to ensure effectiveness of the therapy. These treatments were individualized to correct what the Acupressure Therapists in the Medical Team perceived as being "energy disturbances" in each patient.

The diet plan too was sent via mail. This often (though not the case in underweight women) involved lowering intake of grain carbohydrates and including good fats at every meal. The goal was to reduce insulin resistance and so, proteins too were given only in moderation.

Videos of the exercise regimen that included yoga and parts of a specially designed dance routine, called symbol were sent to participants who just had to follow along with the experts in the video. High levels of compliance were noted on all petals of the 5-petal programme. Counselling, especially on lifestyle changes that were part of the programme was given utmost importance and women were allowed to ask questions and clear doubts via Whatsapp messages at any point on the programme. Any questions/situations that needed immediate medical attention was escalated and the patient received a telephonic consult with a medical expert. The Nutritionist had fortnightly reviews with patients to evaluate progress and make course corrections if needed. Regular report cards on progress were sent to the patient, to ensure encouragement and further compliance.

Patients spoke to an expert from the team every 15 days, to ensure continued adherence to the programme. They also reported onset of natural periods, details of symptoms like less painful periods, better flow, reduced hair fall, reduction in acne etc. A health discussion group was also formed for the women, so they could celebrate each others' progress, ask questions that peers and experts answered, share healthy recipes and participate in group detox programmes, etc.

Flow

Recruitment→ Call→ Diet plan→ Videos→ Magnets→ Supplements

Results

84 women from different parts of India belonging to different age-groups, of the 90 recruits completed the Sepalika 5-petal online PCOS reversal program. The average age of the women was 31.8 years. The mean BMI at baseline was 28.6.

A total of 57 (67.9%) women were on hormonal contraceptives. Of them, 80.7 % (46/57) women got a natural period after joining the 120-day program; 45.6% of which got their first natural period in the 1st month after joining the program and most others got it within the second month (52.6%). Among the women who were not on contraceptive pills at baseline, 85.2% (23/27) got a natural period while on the program. 44.4% of them got natural periods in the first month of the program. Only 4.7% patients, not on contraceptive pills, did not get any natural period throughout the program.

During the 120 days of the program, 66.7% women lost weight. The average weight loss was 2.69 kg. Most women lost weight in the first (57.1%) and second (44.1%) month of the four month program. The average weight loss was 1.2kg in the first month and 0.85 kg in the subsequent months. 13% women gained weight during the program, all of them gaining it in the first month of the program. 20% women did not undergo any change in weight.

More than half of the women enrolled in the program (57.1%) were obese with a BMI above 25. A total of 39.2% women had a difference in BMI; and 68.8% obese women had a change in BMI. The average reduction in BMI was 4.9.

At baseline 36.9% women had a waist-to-hip ratio above 0.8. At the end of the program, 45.2% patients saw a reduction in the waist-to-hip ratio.

Patient-reported improvement in energy levels was seen in 58.3% women. Most of this improvement was seen from the first month onwards (73.5%).

75% women whose goal was acne reduction, achieved it. Subjective improvement in facial or body hair (57.1%); subjective improvement in menstrual symptoms and other symptoms was observed in 20% women enrolled in the program.

Discussion

It is well accepted that PCOS is multifaceted and has a high degree of heterogeneity among individuals with the syndrome. When treating a patient with PCOS it is important to focus on treating the patient's initial needs while decreasing the risk of long-term risk factors. Symptoms will be better treated if the patient is treated by a variety of approaches all working together. The sooner PCOS is identified and treatment is initiated the quality of life and prognosis of the syndrome will improve. The perceived benefits of multidisciplinary clinics globally include improved patient satisfaction, greater weight loss, improved body image, and better management of PCOS from a holistic standpoint^[9]. Similar results were observed in the second phase of the sepalika 5-petal PCOS programme.

An international consortium of polycystic ovary syndrome professional societies and organizations issued new evidence-based recommendations and practice points to promote consistent, evidence-based care and improve health outcomes for women with PCOS, according to a new guideline published in *Fertility & Sterility*. The guidelines make special mention of the fact that PCOS needs a holistic management and health professionals should be aware of other effects on emotional well-being and quality of life^[10]. The focus on emotional well-being and quality of life was well factored for in the Sepalika 5-petal program. More than half of the women in the program reported an improvement in well-being and most of them saw an

improvement from the first month onwards.

The adverse impact of excess weight and the potential predisposition to weight gain have led to intense interest in the optimal dietary approach both to improve the features of PCOS and to achieve optimal weight management. While the majority of clinicians recommend lifestyle management, women with PCOS report they rarely receive lifestyle advice. Some women with PCOS may seek advice from a dietitian which ranges from standard population weight loss recommendations to tailored advice^[11, 12]. A unique method of weight-loss using not just dietary advice and unique exercise forms, but also magnetic acuptherapy, and supplements led to some phenomenal results in the second phase of this program in terms of significant weight loss in most of the participants enrolled in the program.

Weight management advice for women with PCOS needs to consider assessment and treatment of both healthy and unhealthy weight management practices. There is also a need to focus both on improving diet quality and on reducing dietary energy intake when optimizing dietary intake for weight management^[13]. These were taken care of in this online reversal program with positive outcomes.

Studies emphasise the need for a holistic approach by health care providers, including consideration of psychological needs as well as treatment for symptoms^[12]. Participants' positive attitudes to the idea of group education sessions through whatsapp indicate the potential acceptability of this method of providing support. Confirmation and further exploration of the impact of psychological distress emphasises that psychological support should be an important aspect of managing PCOS. Sharing positives and negatives through messaging improves the degree of support provided to patients by their peers.

Several studies confirmed that acupuncture, physical activity and diet regimes may improve metabolic, hormonal and psychological profile of PCOS in women. These positive results have been shown also in animal models, underlying the importance of these treatments, and their combinations, in clinical applications^[14]. The sepalika 5-petal PCOS online reversal program concurs with this ideology.

This was a follow-up of the pilot study with 84 participants and with objective parameters on physical examination and patient reported outcomes in terms of menstrual health and emotional and overall well-being. However, this was a unique online program for reversal of PCOS symptoms. The program was based on a holistic approach to the disease and concentrated on improvement in PCOS symptoms leading to a better quality of life.

Conclusion

It is very much possible to reverse PCOS naturally through diet and exercise. Simple changes to your lifestyle and we will see how it is possible to overcome the symptoms of PCOS without relying on medicines alone. This holistic online reversal program provides a holistic cocktail in managing PCOS from the root, most importantly, helping women with PCOS feel better and more energized.

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