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CONCEPTUAL STUDY ON STHAULYA (OBESITY) IN GYNECOLOGICAL DISORDERS AND ITS MANAGEMENT THROUGH AYURVEDA

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ABSTRACT

Sthaulya (obesity) in Ayurveda comes under the heading of Medaroga which results due to dysfunction of Meda dhatvagni (factor responsible for nourishment/ metabolism of Meda dhatu) and is considered as metabolic disorder. Further, its description is available in "Ashtaunindita Purusha Adhyaya of Charak Samhita Sutrasthana chapter 21". A body mass index (BMI) over 25 is considered overweight and BMI over 30 is obesity (WHO). Rising obesity rates around the world have had a profound impact on women's reproductive health. In obesity androgen will increase, decrease sex hormone binding globulin, insulin resistance causes various Gynecological problems like early puberty, irregular menstruation, oligomenorrhoea or amenorrhea, PCO, fibroid, endometrial polyp, infertility, various kind of heart disease etc. Women of childbearing age with a high BMI (>30%) are at greater risk of ovulation problems and generally respond poorly to fertility treatment. Weight reduction, lifestyle modification, balanced diet improves reproductive outcomes, reduces symptoms and morbidity after gynecologic surgery. Numerous pharmacological treatment options are available, It can also managed through Ayurveda by Shaman and Sodhan Chikitsa and various type of Yoga.

KEYWORDS: Obesity, BMI, Gynecological disorder, Management and Yoga.

INTRODUCTION

Sthaulya (obesity) in Ayurveda comes under the heading of Medaroga which results due to dysfunction of Meda dhatvagni and is considered as metabolic disorder. Further, its description is available in Ashtaunindita Purusha Adhyaya of Charak Samhita Sutrasthan Chapter 21.

Obesity and Overweight are defined as abnormal or excessive fat accumulation that presents a risk to health. A body mass index (BMI) over 25 is considered overweight, and BMI over 30 is obese (WHO).

Rising obesity rates around the world have had a profound impact on women's reproductive health. In obesity androgen will increase, decrease SHBG, insulin resistance causes various Gynaecological problems like early puberty, irregular menstruation, oligomennorhea or amenorrhea, ovular dysfunction, PCO, fibroid, endometrial polyp, infertility, cardiovascular disease, hypertension , DM etc. Women of child bearing age with a high BMI (>30%) are at greater risk of ovulation problems and generally respond poorly to fertility treatment. Weight reduction, life style modification, balanced diet improves reproductive outcomes also reduces morbidity after gynecological surgery. Numerous pharmacological treatment options are available, also managed through Ayurveda by saman and sodhan chikitsa and various type of yoga.

AIMS AND OBJECTIVES

Aim

Obesity its management through Ayurveda and yoga.

Objectives

- To explore the impact of Sthaulya on benign gynaecological conditions.
- Conceptual study on Sthaulya.

MATERIAL AND METHODS

References from various ayurvedic samhitas, modern gynecology text books, various publications, research papers, pubmet have been considered to collect the literary material.

Literature review

Sthaulya in Ayurveda falls under the name Medaroga and originates from Meda dhatvagni dysfunction (factor responsible for Meda nutrition/ metabolismdhatu). Furthermore, its

description is available in Charak samhita Sutrasthana Ashtaunindita Purusha Adhyaya Chapter 21.

Ayurveda also emphasizes Sthaulya as

1. Kapha pradhanyaja (mainly caused by damaged kapha dosa)
2. Meda pradoshaja (multifactorial disease)
3. Bahu dosa avastha (disease caused Meda is mainly affected by dhatu/ tissue)
4. Santarpanjannya vyadhi (disease caused by impaired anabolism/overeating).

Obesity, a metabolic disease which causes various gynaecological problem by affecting their normal physiology.

Various gynaecological problem related to obesity

1) Obesity in puberty

Generally puberty occurs at age of 10-16 years. Elevated BMI scores at age 8(<8; precautious puberty) have been identified as a risk factor for early onset of puberty. Age of menarche is another milestone of female puberty. Other factors such as socioeconomic status, nutritional and even endocrine factors can disrupt or disbalance of both metabolism and the endocrine axis (H-P-O) that can ultimately have effects on pubertal development. Numerous endocrine pathways have been described the link between childhood obesity and insulin resistance which results early onset of puberty. Accelerated aromatization of adrenal and ovarian androgens into adipose tissue increases the bioavailability of sex steroids, promoting earlier adrenarche, pubarche, thelarche and menarche. Girls with precocious puberty have been found to be at increased risk of ovarian hyperandrogenism, irregular menstruation and Polycystic Ovary (PCOS/PCOD), as well as cardiovascular events later in life.

2) Obesity in menopause

Menopause generally occurs at age of 45-50 years. It is well known that obesity and metabolic syndrome are found in women in this period of their life three times more often than before menopause. This is mainly due to visceral fat deposition and leads to an increased risk of diabetes, metabolic syndrome and cardiovascular disease. Increased visceral adiposity is associated with insulin resistance, hypertension, and hyperlipidemia. Obesity also increases peripheral conversion of androgens to estrogens, while high serum levels of unopposed estrogens may promote endometrial hyperplasia and cancer. So obesity may cause abnormal perimenopausal or postmenopausal bleeding(DUB).

3) Obesity in benign gynaecological disorder

a) PCO pattern

PCO is a heterogeneous, 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 hyperandrogenism. At least 50%-70% of patients with PCOS tend to be obese or overweight. The adipose tissue (fat) is considered an endocrine and immunomodulatory organ; it secretes leptin, adiponectin and cytokines which interfere with the insulin signalling pathways in the liver and muscles resulting in insulin resistance, and hyperinsulinaemia.

Raised LH secretion by pituitary gland in response to raised insulin levels can cause infertility or miscarriage through improper oocyte maturation. Insulin resistance leads to hyperinsulinemia which leads to increased production of LH from anterior pituitary which leads to increased production of androgens from ovary.

b) Endometrial polyps

Hormonal factors associated with excess estrogen, such as: Certain diseases like obesity, have been linked to the pathogenesis of endometrial polyps. Endometrial polyp generally related to oestrogen stimulation, these may result of an increased concentration of oestrogen receptors and decreased expression of progresterone receptors. Women with a BMI >30 were more likely to develop endometrial polyps due to hormonal imbalance. Most endometrial polyps are benign, with malignant disease reported in only 1.5% of cases. Obesity increases the levels of estrogen in the blood, so also will increase the risk of uterine polyps.

c) Fibroids

Fibroid is the commonest benign tumor of the uterus, this tumor is composed of smooth muscle and fibrous connective tissue, so named as uterine leiomyoma, myoma or fibromyoma. Incase of obesity fat cells make more oestrogen and sudden changes in hormone scan lead to fibroid growth. It is possible that obesity causes a relatively hyperestrogenic state favoring the growth of fibroids. So obese women (BMI>30) are more prone to develop the fibroid. In obesity increased visceral fat and production of inflammatory mediators might be risk factors for uterine Leiomyomas.

d) Infertility

Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus. In obese women infertility is one of most burning gynaecological problem. In obesity insulin resistance and leptin levels are increased and hyperandrogenemia occurs. Similarly, anovulation changes in adipokine levels and the HPG axis, and steroidogenesis in obese women affects the reproductive system, Sex Hormone-Binding Globulin (SHBG), growth hormone (GH), and insulin Growth factor binding protein (IGFBP) are reduce. Thus, neuro regulation of the hypothalamic-pituitary gonad (HPG) deteriorates. These changes may altered in ovulation function and therefore reproductive health. As BMI(>30)increases, leptin levels increase both in blood and follicular fluid. Thus, obesity is associated with high leptin levels in serum and follicular fluid. Leptin also inhibits LH-stimulated estradiol production by the cells resulting in lower implantation and pregnancy rates, higher miscarriage rates, and higher rates of maternal and fetal complications during pregnancy, obese women are less likely to give birth to a newborn in good health.

Management of obesity

Prophylaxis and curative aspect

1.Lifestyle modification	Quite smoking, avoid Alcohol and modification of sleeping pattern
2. Diet	Balanced diet - 60%carbohydrate, 20%protien, 15-20% fat. Intake of diet with 1800-2000 cal daily is adequate, but also depends on body weight (weight in kg×35). Avoid junk food, excessive sweets, cold drinks etc.
3. Exercise	Rapid weight loss is not recommended, but 1lb/week is safe). Walking for half an hour daily for 5days/week is sufficient to maintain weight.
4.Pharmacological therapy (drugs)	Orlistat (which inhibits pancreatic and other lipases, thus inhibiting fat absorption). Metformin (Increased insulin sensitivity, Decreased free androgens, Increased sex hormone-binding globulin levels, Reduced ovarian volume, Resumption of spontaneous ovulation, regularization of menstrual cycles). Sibutramine (which inhibits reuptake of serotonin and norepinephrine, is the most recently , appetite suppressant). Rimonabant (which is a cannabinoid receptor antagonist, reduces the drive to eat).
5. Bariatric surgery	Gastric bypass and other weight loss surgeries, when diet and exercise haven't work) is effective in morbidly obese women, and can regularize menstrual cycles and resolve polycystic ovary syndrome.

Management through Ayurveda

Sodhan chikitsha

Panchakarma therapy like

- Vaman
- Virechana
- Basti (matra basti, uttar basti)

Saman chikitsha

- Langhana, Ruksha udvartana, Ama pachan, Vyam, Yoga.
- Some classical herbs/formulation:(which have katu, kashya rasa and ushna vipak)
- Herbs like- Guggulu, vidanga, brikshamla, shilajatu, triphala, madhu etc.
- Formulations are- medohara Guggulu, Arogyavardhini vati, Vidangadi lauha, Triphala Guggulu, Mustadi kwath, Navak Guggulu, Loha rasayan, Agnitundi vati etc.

Benefits of yoga

(Various yoga like:Suryanamaskar, Pawanmuktasna, Bhujangasana, Dhanurasana, Ustrasana, Veerbadrasana, Trikonasana, Tadasana, Pranayam like kapalaqvati, anulomvilom etc).

• Improves circulation, tonig of the heart muscle, improve cardiac fitness

• Lowers lipid level

• Lowers plasma glucose, cholesterol level

• Increase insulin sensitivity

• Increase burning calories helps in reduce body weight

• lowers stress

DISCUSSION AND CONCLUSION

Sthaulya (obesity) is a predominant metabolic disorder described by Charaka in Sutrasthana (Ashtaunindita Purusha Adhyaya). Sedentary lifestyle, lack of physical exercise, poor eating habits, urbanisation, Psychological factors, together with genetic predisposition, play an important role in the etiopathogenesis of Staulya. Kapha Prakriti individuals have a higher risk of becoming obese (Sthaulya). Some herbal medicines or formulations are mentioned in various Ayurvedic classics. Along with Yoga and Panchakarma therapy appears to be very effective in treating obesity. By adopting a simple lifestyle and healthy eating habits, everyone can enjoy life to the fullest without lifestyle-related diseases such as obesity. Ayurveda and yoga are better, easier and better healthy way to combat obesity and other

lifestyle disorders. Further exploration of other treatment modalities and their validation through research are needed.

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