

## INTRODUCTION

Polycystic ovarian syndrome (PCOS) is a common endocrinologic disorder during adolescence. The onset of excessive ovarian androgen production and chronic anovulation is mainly found during early adolescence or soon after menarche and usually leads to hyperandrogenism and irregular menstrual bleeding (*Scott, 2007*). The etiology is unknown. Hypotheses include excess luteinizing hormone or adrenocorticotrophic hormone stimulation of the ovaries, and imbalance of regulatory peptides (insulin, insulin-like growth factor, inhibin, follistatin). Increased circulating insulin decreases the concentration of sex hormone-binding globulins, thereby increasing the amount of unbound free testosterone (*Nestler, 2008*).

Moreover, the major clinical features are excessive hair growth (hyperandrogenism), menstrual irregularities (anovulation), and polycystic ovaries. This triad of symptoms is commonly accompanied by obesity, insulin resistance, overproduction of ovarian androgens, increased pituitary luteinizing hormone (LH) secretion, incomplete maturation of ovarian follicle development and infertility. Women with Polycystic ovarian syndrome (PCOS) are also at increased risk for diabetes mellitus, endometrial carcinoma, and cardiovascular disease (*Goodarzi & Azziz, 2009*).

Additionally, women with polycystic ovarian syndrome PCOS are at risk for the following: endometrial hyperplasia and endometrial cancer (cancer of the uterine lining) are possible, due to excessive accumulation of

uterine lining, and also lack of progesterone resulting in prolonged stimulation of uterine cells by estrogen, infertility (primary and secondary), Increased rate of miscarriage (early supplementation of progesterone may be required to maintain the pregnancy), a higher rate of having an eating disorder than the general population, insulin resistance, type 2 diabetes, generally thought to be caused by hyper insulinemia, high blood pressure, dyslipidemia disorders of lipid metabolism - cholesterol and triglycerides) and cardiovascular disease (*Blank et al.2008*) .

The main goals of treatment for an adolescent with PCOS are to regulate menstrual function, reduce androgen and insulin levels, and improve dermatologic symptoms. Often, as insulin levels are reduced, androgen levels are also lowered and menses may become more regulated. Evidence suggests that a moderate weight loss (5% to 7% of total body weight) may significantly improve symptoms and regulate menstrual function (*Salmi et al, 2004*).

The management options in adolescent PCOS are numerous, usually symptomatic and possibly preventative. Weight loss for the obese and treatment with some anti-androgens is well established in adults. The first line of treatment should be a serious attempt to lose weight. Central obesity exacerbates insulin resistance and if a more normal body weight can be maintained by correct diet and exercise instruction. This is good strategy in order to achieve short-term goals such as reduction in hirsutism, acne and regular menstruation, and long-term goals such as return of ovulation, consequent conception and almost certainly a decreased prevalence of cardiovascular disease, hypertension and diabetes mellitus in later life.

Weight loss has the undoubted advantages of being effective and cheap with no negative side effects and does not involve long term medication (*Homburg & Lambalk 2004*).

Health related quality of life (HRQOL) can be defined as the impact of health or disease on physical, mental and social well-being from the patient's point of view (*Kolotkin et al, 2006*). Health related quality of life is increasingly recognized as an important measure for assessing the burden of chronic diseases (*Buti et al, 2006*).

Nurse practitioners have an important role in the evaluation and treatment of patients with PCOS. Appropriate management encompasses timely diagnosis, treatment of numerous physical problems, thorough patient education, and psychosocial support. Nurse practitioners (NPs) have the skills and ability to provide a holistic approach to care that will help patients with PCOS achieve good clinical outcomes and a better quality of life (*Barron & Falsetti, 2008*).

### **Significance of the Study:**

5-10 % girls of childbearing age (20-40) have PCOS but 30% of girls have some PCOS symptoms. Polycystic ovary syndrome has a significant effect on adult girls, resulting in diminished quality of life, altered feminine identity, and dysfunction in the family and work environment. Adolescent girls with PCOS have significant disruption in health-related quality of life compared to their healthy peers (*Powers et al., 2009*). So this study will be conducted to increase awareness and knowledge about the symptoms of PCOS among adolescent girls that can lead to earlier diagnosis and can also potentially reduce the risk of long-term complications such as cardiovascular disease. in addition to there is no previous studies are undertaken in Faculty of Nursing , Benha University about the quality of life for girls with Polycystic ovarian syndrome.