

INTRODUCTION

Menopause is a date for those women who still have a uterus, it is defined as the day after a woman's last period ever finishes. This span of time is also referred to as "change of life" or "climacteric". The average age of menopause is 51 years, and the normal age range for last period ever is somewhere between 45 to 55 (*Freeman et al., 2007*).

A woman who still has uterus can be declared to be in post menopause once she has gone 12 full months with no flow at all, not even any spotting. The reason for this delay in declaring a woman post menopausal is because periods become very erratic at this time of life, and therefore a reasonably long stretch of time is necessary to be sure that the cycling has actually ceased (*Freeman et al., 2007*).

At menopause, the ovaries produce less of the hormone estrogen. Less progesterone is produced as well. Although periods tend to be less regular around menopause, irregular bleeding can be a sign of problems (*Timmermans et al., 2007*).

Transvaginal ultrasound is routinely performed as part of a pelvic examination in postmenopausal woman (*Warming et al., 2002*). The normal value of endometrial thickness in asymptomatic postmenopausal women is $\leq 5\text{mm}$. Five millimeters has been "cut off point" for excluding endometrial pathology after menopause and more than 5mm need endometrial pathology to exclude disease (*Neele et al., 2002*).

Body mass index “BMI” is a number calculated from a person’s weight and height. BMI is an inexpensive and easy to perform method of screening for weight categories that may lead to health problems (*Gallagher et al., 1996*). Formula = weight (kg) / (height (m))² (*Mei et al., 2002*).

BMI of 18.5- 24.9kg / m² is normal weight .

BMI under 18. 5 kg / m² indicate under weight .

BMI of 25-29.9 kg / m² indicate overweight.

BMI over 30 kg / m² indicate obesity .

BMI over 40 kg / m² indicate morbid obesity

Obesity is a condition of increased estrogen production in women since estrogen production rate significantly correlates with body weight and amount of body fat and ratio of circulating active to inactive estrogens is increased (*Pasquali et al.,2000*).

Obesity increases endogenous free estrogen level including peripheral conversion of adrenal steroids by fat cells and decreased levels of sex hormones binding globulin (*Andolf et al., 1993*). It has been shown that women who are 20 – 50 pounds overweight have threefold and women more than 50 pounds have tenfold increased risk of endometrial cancer (*Douchi, et al., 1998*).

Several studies (*Andolf et al., 1993*) and (*Douchi, et al., 1998*) have reported relationship between obesity and endometrial thickness, also as risk factor in development of endometrial cancer that stimulate us to do this study.