SUMMARY

Cessation of menstruation is considered as the cardinal symptom of menopause, endometrium normally undergoes a gradual atrophy, starting with an inactive phase in which neither proliferation nor secretion is present and ending up as a thin layer, often riddled with cystic cavities lined by a cuboidal or flat epithelium, in which the organelles are pushed to random locations and the stroma becomes fibrotic.

The normal postmenopausal endometrium is atrophic, appearing as a thin echogenic line. The endometrium normally measures 5mm or less (double layer) in anteroposterior diameter in postmenopausal women who are not receiving Hormone Replacement Therapy.

This study has been conducted on 300 menopausal women to evaluate the relationship between endometrial thickness and body mass index in asymptomatic women . We used transvaginal ultrasonound in studying the endometrial thickness in cases of asymptomatic postmenopausal women with histopathologic endometrial studying of these cases.

Body mass index is measured for all cases as the individual's body weight divided by the square of her height.

In the present study the age of onset of menopause ranging from 55-65 years with a mean of 59.95 years and a S.D $\pm$3.73 years and the years of age since menopause ranging from 5 -15 years with a mean of 9.95 years and S.D of ± 3.73. The thickness of the endometrium ranges from 3-8mm with a mean of 5.85 mm and S.D $\pm$ 0.640 .The body mass index ranges from 21.2 – 46.7Kg/m^2 with a mean of 28.74 Kg/m^2 and S.D $\pm$ 6 .

A negative correlation was found between age and endometrial thickness (r = -0.224, p: <0.05).The results have shown also a negative correlation between endometrial thickness and the years since menopause (**r**= - 2.84, p: < 0.01). But it was found that BMI was positively correlated with endometrial thickness according to the results(r=0.841, p: <0.001).

So, There is a strong relationship between endometrial thickness and Body Mass Index, regardless the age of female and years since menopause.

Five mm endometrial thickness is recommended as a cut off value below which endometrial abnormalities could be excluded and above it endometrial abnormalities to be expected with the need for using other diagnostic complementary technique as histopathologic evaluation to establish the diagnosis.

Two hundred &eighty eight cases was found equal or less than 5mm, and 12 cases more than 5 mm for which endometrial sampling was done, 10 cases (83.3%) revealed a picture of atrophic endometrium, only one case (8.3%) of chronic endometritis , and 1 case (8.3%) revealed a picture of endometrial polyp.

Conclusion:

There is positive relationship between BMI and endometrial thickness in asymptomatic postmenopausal females.

Screening studies over larger groups of obese asymptomatic postmenopausal women is recommended.