

## **ABSTRACT**

**Title of the Abstract: A PROSPECTIVE OBSERVATIONAL STUDY TO DETERMINE THE AETIOLOGY OF POSTMENOPAUSAL BLEEDING AND CORRELATION OF ENDOMETRIAL THICKNESS IN ENDOMETRIAL CARCINOMA IN OUR POPULATION.**

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**Key Words:** PMB –Postmenopausal bleeding, TVS- Transvaginal sonography, ET- Endometrial Thickness, Endometrial cancer, atrophic endometrium.

### **Objective:**

1. To determine the most common cause of postmenopausal bleeding (PMB) in our menopausal women.
2. To determine the correlation of endometrial thickness in endometrial carcinoma and to set a cut-off thickness.

**Methods:** This prospective observational study was conducted in Christian Medical College Hospital, Vellore between February 2016 to July 2016 in the department of Obstetrics and Gynaecology. We included all postmenopausal women who presented any time after one year of menopause with vaginal bleeding. Detailed history, clinical examination, per speculum and per vaginal examination was done systematically to evaluate the clinical diagnosis of postmenopausal bleeding. Details of the patient including her age, age of menarche, age of menopause, parity, body mass index, amount of bleeding, number of episodes of postmenopausal bleeding, associated co morbidities and any drug intake like hormone therapy, and anticoagulants are noted, following which, the diagnostic evaluation for postmenopausal bleeding is done by using transvaginal ultrasound and the endometrial thickness was determined. Endometrial biopsy is done after ultrasound and the histopathological report was correlated.

**Results:** Total 144 patients were included in our study. Mean age of PMB was 56.6 years. Mean age of developing malignancy was 58.8 years when compared to 55.71 years in benign conditions which is statistically significant. Risk factors for endometrial malignancy like nulliparity, increasing BMI, medical co-morbidities like diabetes and hypertension had statistically significant correlation in our study. Other risk factors like, early menarche, late menopause, drug intake, family h/o malignancies did not show any association in our study. Based on the histopathological findings, atrophic endometrium constituted for 19.4%, endometrial polyps 16.66%, endometrial cancer 15.27%, cancer cervix 14.48%, endometrial hyperplasia 9.72%, ovarian cancers 4.16%, proliferative

endometrium 2.08%, secretory endometrium 2.77% and others with no specific histopathological diagnosis 15.27%. Of the total pipelle sampling done, 7.3% had tissue inadequate for evaluation. In our study, 43.75% of women with postmenopausal bleeding had malignancies and 56.25% had benign conditions. The prevalence of endometrial cancer in our study population was 14.6% with 95% CI (9.3%-21.5%). By transvaginal ultrasound, endometrial thickness of 4mm was set as a cut-off thickness to discriminate women who are at risk for endometrial malignancies with a sensitivity of 96.97%, specificity of 15.5% and a negative predictive value of 92.3%. We also found that, the risk of developing endometrial cancer is increased five times when the endometrial thickness is  $\geq 4$ mm (Odds ratio 5.91).

**Conclusion:** All women with postmenopausal bleeding should be evaluated even if it is the first episode. Transvaginal ultrasound and pipelle sampling still holds good for evaluation of PMB. In developing countries like India, cervical cancer evaluation should also be a part in evaluating PMB. Endometrial thickness of  $\geq 4$ mm correlates well with malignancy in Indian women too. Hence, women with endometrial thickness of  $< 4$ mm need not have any other with invasive tests like endometrial biopsy, unless there is recurrent bleeding or ultrasound features suggestive of any abnormalities like adnexal mass.