Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 8, Issue, 01, pp.25522-25529, January, 2016

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

ISSN: 0975-833X

RESEARCH ARTICLE

HISTOPATHOLOGICAL STUDY OF ENDOMETRIUM IN POSTMENOPAUSAL WOMEN

***Dr. Durga kumari Paidi and Dr. T. Sudha**

Andhra Medical College, King George Hospital, Visakhapatnam, India

ARTICLE INFO

Article History:
Received 18th October, 2015
Received in revised form
25th November, 2015
Accepted 25th December, 2015
Published online 31st January, 2016

Key words:

Post menopausal (pm) women,
Pm bleeding,
Histopathology of endometrium,
Endometrium Thickness (ET),
Transvaginal sonography.

ABSTRACT

Introduction: Menopause is permanent cessation of menstruation secondary to genetically programmed loss of ovarian follicles and cessation of ovarian estrogen secretion. Post menopausal bleeding is an alarming symptom of genital pathologies and requires complete evaluation to exclude malignancy (5% to 15%). Over half of the cases show atrophic endometrium. Endometrial proliferation which may develop into hyperplasia or even carcinoma or estrogen available from other sources.

The aim of this study: Evaluation of postmenopausal women with bleeding or other symptoms, correlating endometrial thickness and histopathology.

Materials and Methods: 1 4 2 menopausal women presenting to KGH (2013- 2014 year) with either pm bleeding or ET>4mm in transvaginal sonography with other symptoms like white discharge or ovarian tumors or fibroid or polyps were subjected to endometrial curettage for histopathology; cervical or other than uterine pathology were exclude. Based on endometrial echogeneity categoried as four structural categories: homogeneous, heterogeneous low or high-echo. Analysis is based on morphological criteria to assess endometrium. Endometrial histology as five categories: normal, residual proliferation, hyperplasia (polyp), atypical adenomatous hyperplasia; and endometrial carcinoma

Result: In this study regressive cystic atrophy accounts for 50% and endometrial thickness is 4 or <4mm in all these cases. One case had malignancy and 2 cases showed endometrial hyperplasia. A case with fibroids with polyp had ET>8mm.

Conclusion: ET 4 or less exclude endometrial pathology.

Copyright © 2016 Durga kumari Paidi and Sudha. *This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.*

Citation: **Durga kumari Paidi and T. Sudha, 2016.** "Histopathological study of Endometrium in postmenopausal women", *International Journal of Current Research,* 8, (01), 25522-25529.

INTRODUCTION

Menopause is derived from the Greek word meno (month) and pause to stop.(amenorrhoea of 12 months after final menstrual period) Mean age of menopause is 48years. Most of the symptoms are associated with signs of estrogen deficiency and has a considerable impact on women's health related quality of life. 73% of these women present with post menopausal bleeding and regarded as ominous and serious alarm of genital pathologies. 5% to 15% of the cases of postmenopausal bleeding are due to endometrial carcinoma and 5% account for endometrial polyps. Over half of the cases with postmenopausal bleeding shows atrophic endometrium, vascular degenerative changes in the uterine blood vessels have been suggested as a possible etiology in these cases.

***Corresponding author: Dr. Durga kumari Paidi,**
Andhra Medical College, King George Hospital, Visakhapatnam, India.

When estrogen is available to the endometrium from other sources, it may lead to endometerial proliferation which may develop into hyperplasia or even carcinoma. In this present study of 142 menopausal women, 71% present with bleeding p/v, associated gynecological pathology is found in 30% of cases. Senile or regressive cystic atrophy is present in 50%of cases and in all cases the endometrial thickness is 4 or <4mm. One case had malignancy and 2 cases showed endometrial hyperplasia. In these cases ET is >4mm. A case with fibroids with polyp had ET>8mm and its endometrium is proliferative phase.

Aim of the study

The purpose of this study is to (American College of Obstetricians and Gynecologists, 1993) investigate various conditions with which menopausal women presents and their clinical significance and (Clark *et al*., 2004) Evaluation of endometrial pathology by histopathology and transvaginal sonography.

MATERIALS AND METHODS

A case control study was conducted at Andhra Medical College, **OBGYN department,** Visakhapatnam.

Objective: To investigate endometrial histopathology in menopausal women presenting to KGH OPD during the year 2013- 2014. Endometrial curettage is done in all these cases. Post menopausal bleeding due to cervical pathology is excluded.

All postmenopausal women with either pm bleeding or ET>4mm with other symptoms like white discharge or ovarian tumors or fibroid or polyps were subjected to histopathological study and these were classified. Endometrial curettage was performed using Novak curettes in 142 patients and the tissues were sent for histopathological examination. The procedure is performed under local anaesthesia with lidocaine 2% given in paracervical areas as minor operative procedure.

Transvaginal sonography was performed with the patient lying in a supine position. The maximum thickness of the endometrial echo was measured from one myometrial face to the other in the longitudinal section of the uterus, excluding the intracavitary fluid. In addition, endometrial homogeneity and echogeneity (with reference to the adjacent myometrium) were visualized as a central echo between endometrial interfaces. Four structural categories were visualized: (1) homogeneous low-echo, (2) homogeneous high-echo, (3) heterogeneous low-echo, and (4) heterogeneous high-echo.

The morphological criteria to assess the endometrium is: nonpathological, <6 mm- with homogeneous low-echo; suspect, <6 mm and heterogeneous high-echo or >7 mm and heterogeneous low-echo; pathological, >7 m and heterogeneous high-echo, respectively. The histological findings were divided into five categories: (1) normal for age group; (2) residual proliferation (weak endometrial proliferation); (3) hyperplasia (e.g., simple polyp, glandular polyp, glandular cystic polyp); (4) atypical adenomatous hyperplasia; and (5) endometrial carcinoma.

Analysis

Table 1. Study of Endometrium in post menopausal women

Menopausal age	No. of cases studied{142}	Percentage
40-55 yrs	46	32.39%
55-70yrs	93	65.4%
>70yrs	3	2.1%

Table 2.

Ultrasound TVS	Endometrial thickness	No. of cases studied	Percentage
<4mm	Homogenous	135	95%
	heterogenous	2	1.4%
5-8mm	Homogenous	3	2.1%
	heterogenous	1	0.7%
>8mm	Homogenous	0	-
	heterogenous	1	0.7%

Table 3.

Type of endometrium in HPE	No. of cases studied	Percentage
Senile or regressive cystic atropy	72	50.7%
Early Proliferative Phase	31	21.8%
Late proliferative phase	25	17.6%
Proliferative cystic dilatation	3	2.1%
Secretary endometrim	5	3.5%
Simple hyperplasia with cystic dilatation of glands	1	0.7%
Fragments of endometrial glands	1	0.7%
Complex endometrial hyperplasia	3	2.1%
Adenocarcinoma	1	0.7%

Table 4.

Indication for study	No. of cases studied	Percentage
Post menopausal bleeding	102	71.8%
ET<4mm	98	
ET>4mm	4	
White discharge with serosanguious / ET>4mm	8	19.75
Prolapse with ET>4mm	2	1.4%
Ovarian cyst with ET>4mm	9	6.3%
Fibroid with ET 8mm	1	0.7%

RESULTS

In the study group, 65.4% were 55-70yrs and 32.39% were 40-55yrs age group. Only 3% are above 70%. Measurement of endometrial thickness in transvaginal ultrasound in these cases are as follows. Majority ie, 137cases (96.4%) had ET<5mm, in 4 cases (2.8%) ET is 5-8mm and only in one case ET is >8mm a case of fibroid uterus with submucous polyp. Histopathological examination revealed senile or regressive cystic atrophy in 72% of cases secretary phase in 5% which are considered as normal variants, and in 31% & 25% the endometrium is in early & late proliferative phase which are grouped under category two, one case (0.7%) is simple hyperplasia. 3 cases are complex hyperplasia and 1case is adenocarcinoma grouped under pathological category. In this study, post menopausal bleeding accounts for 71.8% .98cases are <4mm & 4 cases ET is >4mm. Twenty cases had endometrium thickness >4mm and associated with other gynecological disorders.

DISCUSSION

Diagnostic dilatation and curettage was used to obtain tissue samples. This is the preferred method, according to number of studies, with a high rate of accuracy. Other methods reported in the literature include aspiration of the uterine cavity. Histological methods are reported to be superior to cytological methods in the detection of early lesions. Some centers are now using hysteroscopy with endometrial sampling on a simple outpatient basis. The mean age group (54.29 years), is similar to that reported by Miyazawa and Lidor 6 who reported ages of 55 and 56 respectively. The risk factors were not analysed in our study. None of our patients are on HRT. Increase in uterine size was found in certain cases with hyperplasia and is supported by other studies. Vaginal discharge with or without bloody staining was found in about 19% of patients.

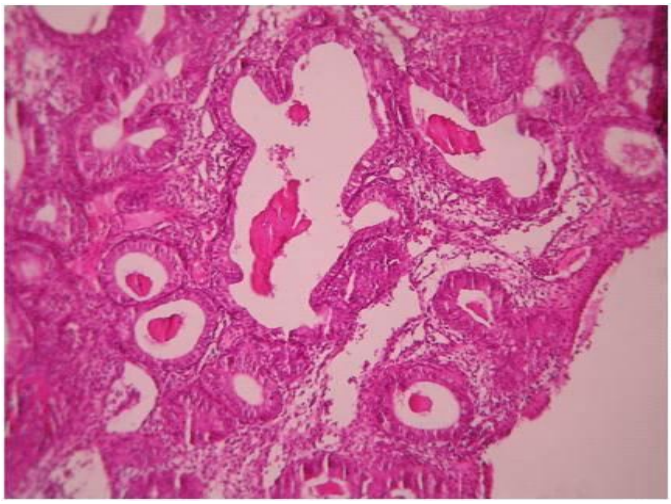

Figure 1. Cystic glandular hyperplasia

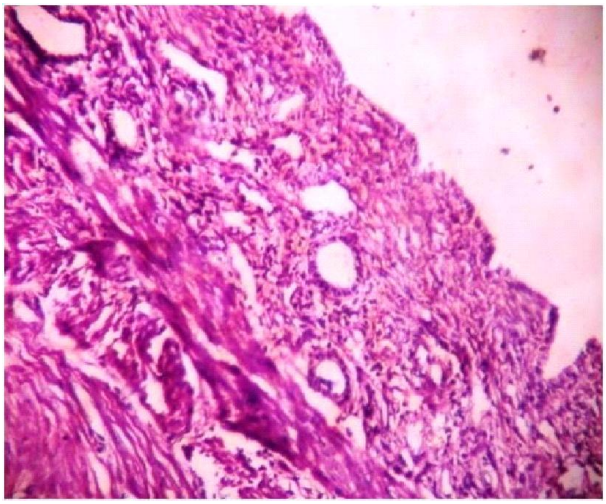

Figure 2. Atropic endometrium

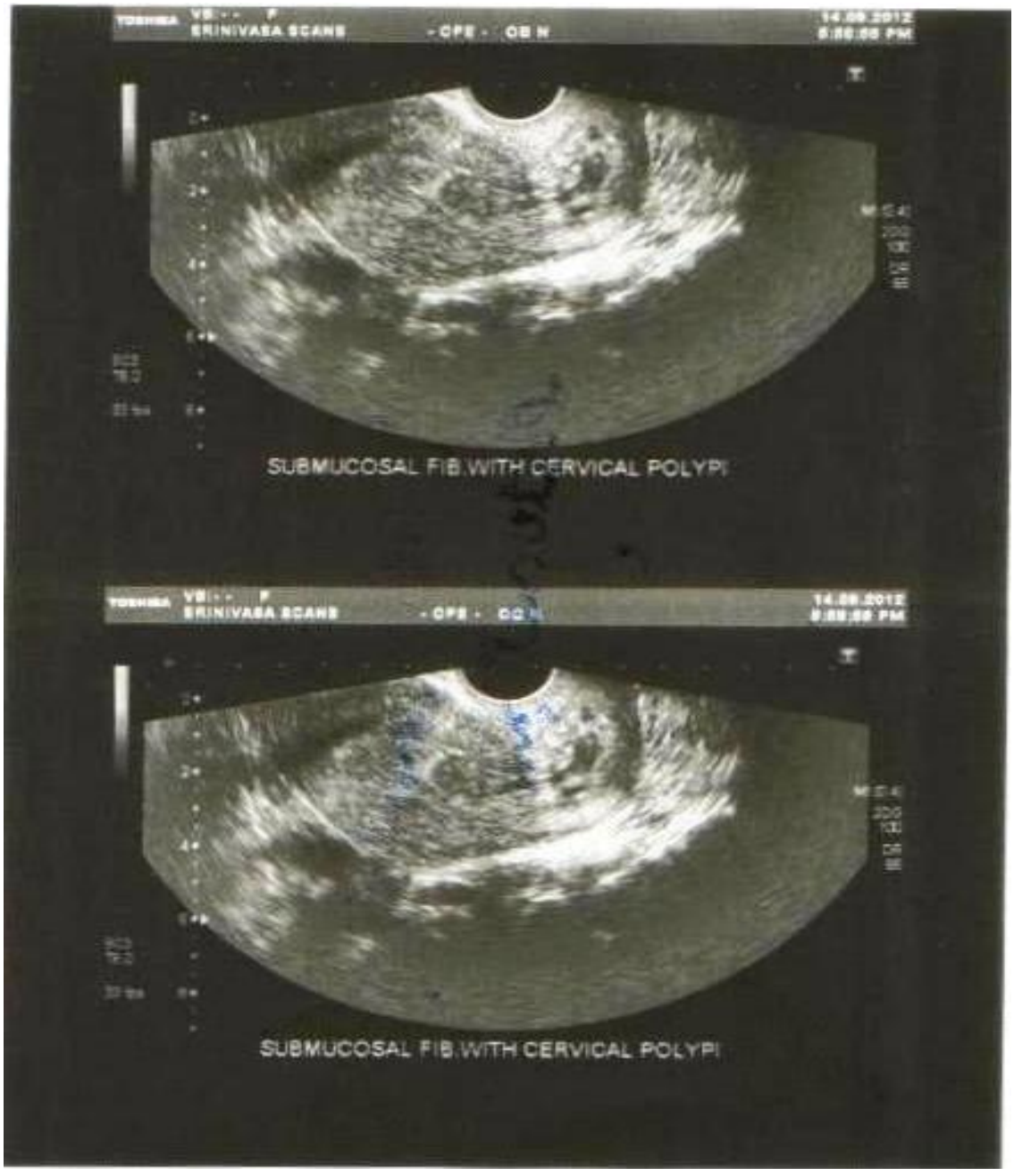

Figure 3. Sub mucosal fibroid with polyp

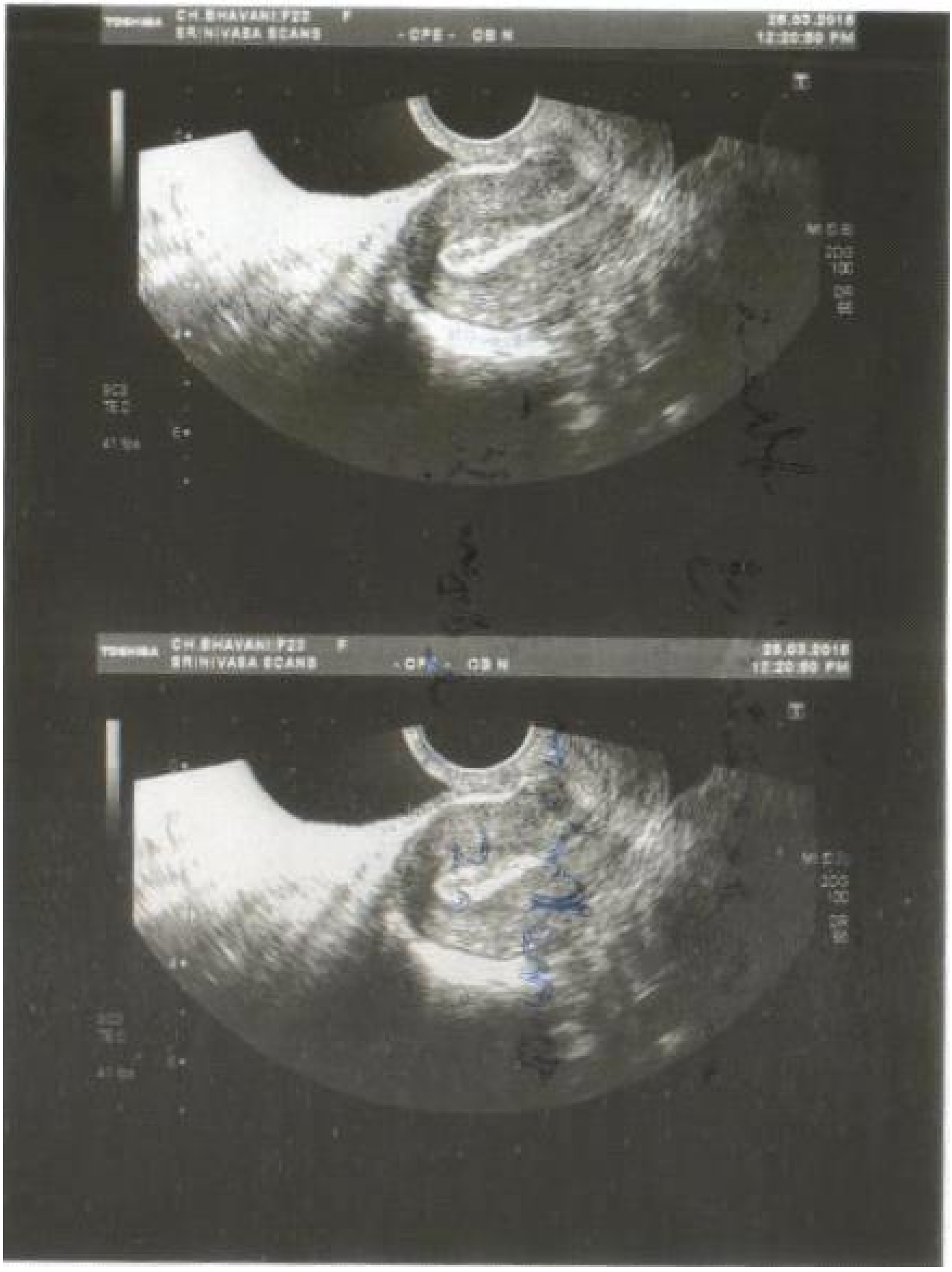

Figure 4. Homogenous endometrium

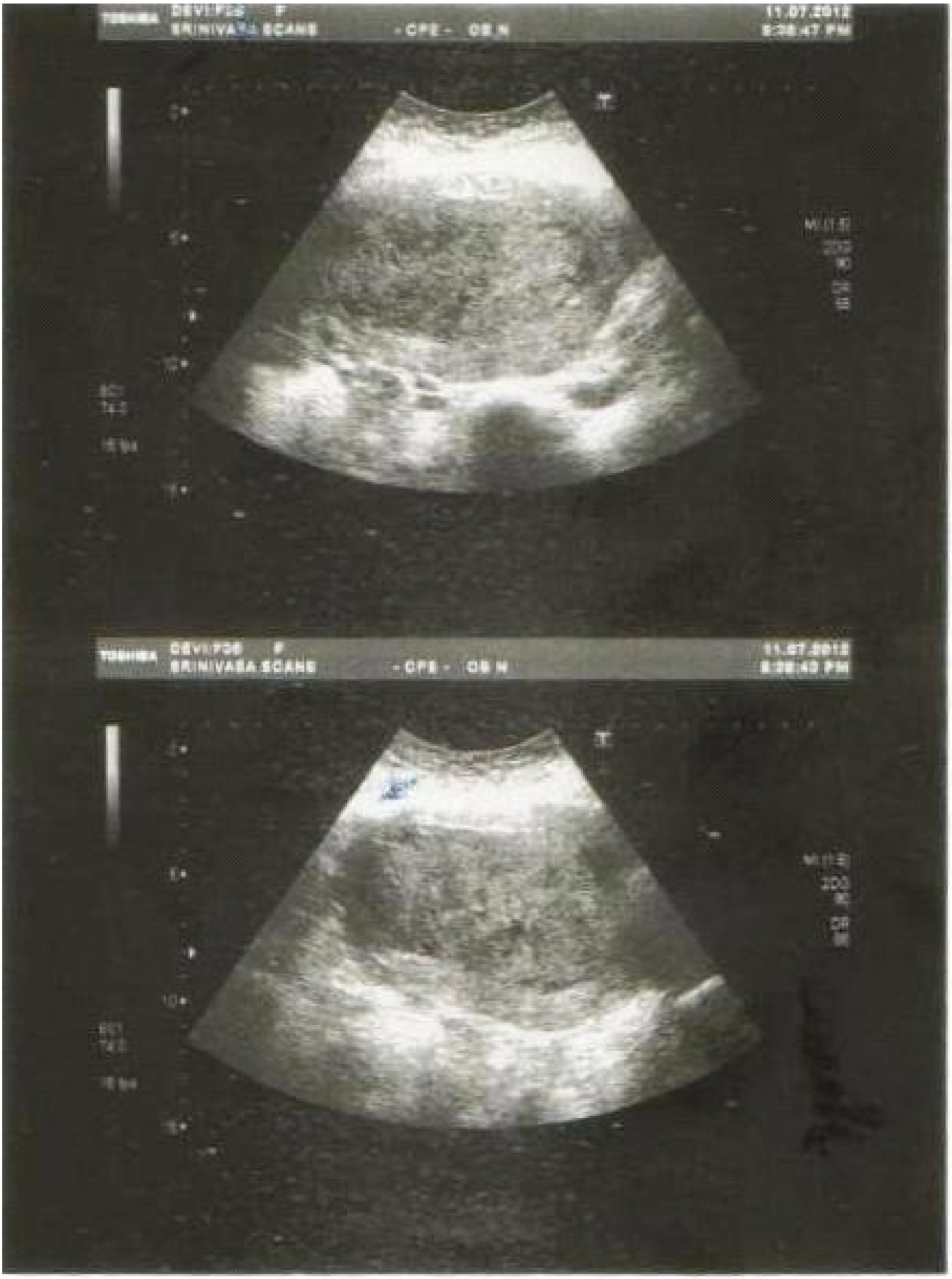

Figure 5. Heterogenous endomerium(carcinoma endometrium)

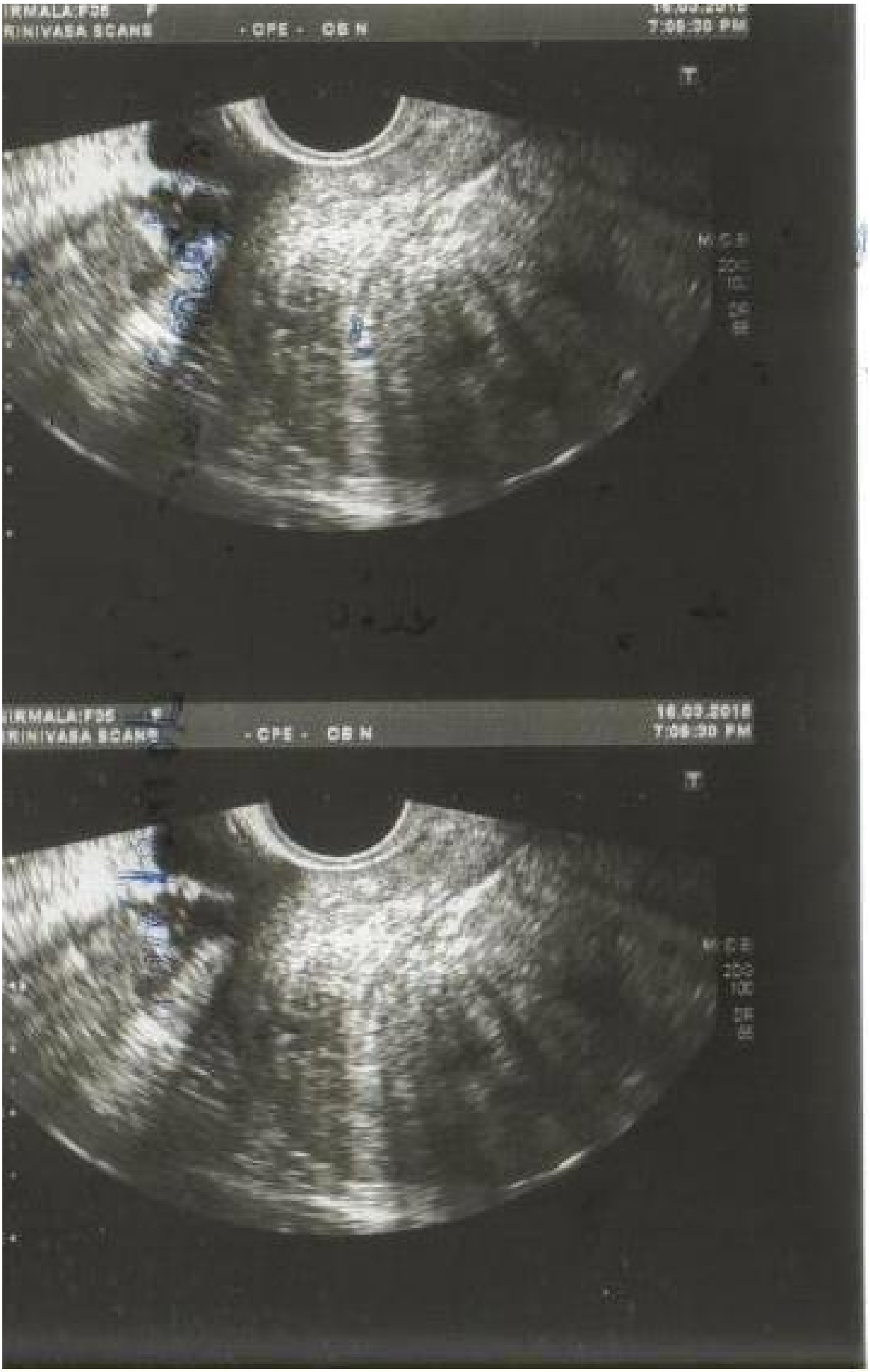

Figure 6. Adenomyosis with indistinct endomyometrial interface

Figure 7. Trilaminar endometrium

Pelvic masses other than uterine were detectable in 9 patients. This is closed to the rate of 5 % reported by Reid. The malignancy rate of 1/142 cases (0.7%) in our series contrasts with the malignancy rate ranging from 14.3 % reported by White to about 33 % reported by others. Pathological endometrial patterns were found in group where ET is 6-7mm and heterologous. The incidence of benign atrophic endometrium was higher than Reid study and the ET is <4mm & homologous. Reid reported 9% of cases with proliferative endometrium and in our study it is 4%. Pathological variety was 2.8%. Other studies showed similar percentage of hyperplasia. Endometrial polyps were seen in one case in which ET is >8mm. Lidor reported 8 % endometrial and 10 % cervical polyps. The endometrial carcinoma was found in only 0.7% of patients, much less than that reported by other studies: Miyazawa 6.8 %, Lidor 7.7 %, 14.3 %, Reid 29.5 % and Lee 11 %. The cervical cancer and other pathologies were excluded in our study.

A Study of Endometrial Pathology by Transvaginal Color Doppler Ultrasonography and its Correlation with Histopathology in Post-menopausal Women was done by I. Bano, Professor, J. N. Medical College, A. M. U. Aligarh. This study was on 38 women presenting with history of at least 6 months amenorrhoea followed by bleeding per vaginum. Transvaginal colour Doppler (TVS) followed by fractional curettage was done. No case of endometrial carcinoma was detected when the endometrium was <4 mm, making the sensitivity as 100%, NPV 100%, specificity 13.33% and PPV 23.53%. Using RI = 0.81 as cut off value for discriminating benign and malignant endometrium. Conservative approach may be offered to women showing ET of less than 4 mm and high impedance to flow in uterine and endometrial vessels. Another prospective study in 150 women, aged 45 to 70 years, who were hospitalized for different reasons at the Obstetric-Gynecology Clinic in Prishtina, Kosovo during 2007. Trans-vaginal sonography was performed in all 150 patients. Endometrial curettage was performed in 82 patients, and the tissues were sent for histopathological examination**.** This study concludes that most of the women in postmenopausal age with symptoms especially like bleeding needs thorough evaluation even though the commonest causes are most benign. Ultrasound imaging of endometrial morphology is an important basic investigative modality. In the present study, transvaginal sonography accurately identified the endometrial pathology in women with postmenopausal bleeding. It is also a principle method for selectively identifying women with menopausal bleeding who may require further examination by invasive methods such as endometrial biopsy (Carlos *et al*., 2001).

This study results were correlated with two studies, one was done at Kosovo and the other was at Basrah Maternity Teaching Hospital. 202 cases of PMB were selected and curettage was done to study histopathology of endometrium during 1990-1999. The prospective study at Kosova, Obstetric-Gynecology Clinic in Prishtina was carried out in 150 women in postmenopausal age who were hospitalized for different reasons at Kosovo during 2007. Transvaginal sonography was performed in all 150 patients. Endometrial curettage was performed using Novak curettes in 82 patients in whom ET< 6mm, and subjected for histopathological examination. Analysis is done similar to our study as four ultrasound structural categories and five histological categories.

Acknowledgement

Best regards to Dr. Savitri (Radiologist), Dr. Bhagyalakshmi (Pathologist).

REFERENCES

American College of Obstetricians and Gynecologists. Estrogen replacement therapy and endometrial cancer. ACOG Committee Opinion: Committee on Gynecologic Practice Number 126-August 1993. *Int J Gynaecol Obstet*., 1993; 43:89.

Carlos RC, Bree RL, Abrahamse PH, Fendrick AM. Cost effectiveness of saline assisted hysterosonography and officehysteroscopy in the evaluation of postmenopausal bleeding. *Acad Radiol*., 2001; 8: 835-44.

Clark TJ, ter Riet G, Coomarasamy A, Khan KS. Bias associated with delayed verification in test accuracy studies: accuracy of tests for endometrial hyperplasia may be much higher than we think! *BMC Med*., 2004;2:18.

Dangal G. A Study of Endometrium of Patients with Abnormal Uterine Bleeding at ChitWan Valley. *Kathmandu Univ Med J.* 2003;1: 110-2.

Dawood NS, Peter K, Ibrar F, Dawood A. Postmenopausal bleeding: causes and risk of genital tract malignancy. *J Ayub Med Coll.*

Lidor A, Ismajavich B, Confino F and David MP. Acta Obstet Gynecol, 1964;7:464.cand 1986.

MacDonald CD, Hemsell DL, Porter JC., *Am J Obstet Gynecol*., 1978; 130:448

Miyazawa. *Obstet Gynecol*., 1983; 61: No. 2 February.

Obstetric-Gynecology Clinic in Prishtina, Kosovo during 2007. *Medical Journal of Babylon*, 1:3, 2014 doi:1812-156X-1-3 Published :30 September 2014.

Reid PC, Brown VA, Fothergill DY., *Br J Obstet Gynecol*., 1993; 100.

Sheikh M, Sawhney, Khurana A, Al Yatama M. Alteration of sonographc texture of the endometrium in post-menopausal bleeding a guide to further management. *Acta Obstet Gynecol Scand*., 2000;79:1006-10.Yousaf S, Shaheen M. and Rana T. Frequency of Endometrial Carcinoma in Patients with Postmenopausal Bleeding. ANNALS2010;16 290-94 Gredmark T, Sonja Kvint, Guillaume Havel, Lars Ake Maltsson. Histopathological findings in women with postmenopausal bleeding. *British Journal of Obstetrics and Gynaecology*., 1995;102: 133-36.

Sousa R, Silvestre M, Almeida e Sousa L, Falcão F, Dias I, Silva T, De Oliveira C, Oliveira HM. Transvaginal ultrasonography and hysteroscopy in postmenopausal bleeding: a prospective study. *Acta Obstet Gynecol Scand*., 2001; 80: 856-62.

Takkar N, Goel P, Dua D, Mohan H, Huria A, Sehgal A. Spectrum of gynaecological disorders in older Indian women: a hospital-based study. *Asian J Gerontol Geriatr.,* 2010; 5: 69–73.

****