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ENDOMETRIAL HISTOPATHOLOGY FINDINGS IN POSTMENOPAUSAL WOMEN

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ABSTRACT. Abnormal uterine bleeding is a common gynaecological complaint, an important problem of menopause women's health. Post menopausal bleeding is generally regarded as an ominous and serious alarm of genital pathologies. The term "post menopausal bleeding" generally implies bleeding from the uterus and it is essentially the only bleeding of importance at the postmenopausal age. The current study was carried out to evaluate various causes of postmenopausal bleeding based on histopathology, and the percentage of various benign, premalignant and malignant endometrial and cervical lesions in post menopausal bleeding.This retrospective study of endometrial pathology in postmenopausal bleeding was conducted by the Pathology Departament of the Obstetric and Gynecology Hospital of Arad, Romania, between January 2010 – December 2014. We examined a number of 258 postmenopausal women that came with abnormal uterine bleeding. Exclusion criteria were premature menopause whether surgical or natural, age less than 55 years and patients on hormone replacement therapy. In our study atrophy of the endometrium and chronic hypotrophic endometritis was the predominant finding in the women in the postmenopausal period (41,85%). The incidence of benign endometrial polyps (12,02%), adenocarcinoma of the endometrium was found in 27,52% of the samples. Endometrial hyperplasia, with or without atypia, is considered to be a precursor of carcinoma [13] and was found in about 15,50% of women in the present study. Postmenopausal bleeding is a symptom of varied etiologies and is not always because of malignant conditions. Therefore, the histologic examination has to be careful in order to find benign, premalignant and malignant lesions. An accurate diagnosis will make it much easier to counsel the patient confidently about the appropriate course of action and facilitate in carrying out the proper treatment plan that will benefit the patient.
KEYWORDS: endometrial atrophy, benign endometrial polyps, endometrioid carcinoma

INTRODUCTION

Abnormal uterine bleeding is a common gynaecological complaint, an important problem of menopause women's health. Post menopausal bleeding is generally regarded as an ominous and serious alarm of genital pathologies. The term "post menopausal bleeding" generally implies bleeding from the uterus and it is essentially the only bleeding of importance at the postmenopausal age.

Postmenopausal bleeding should always be investigated no matter how minimal or non-persistent. Endometrial curettage for histological examination is an important step in the evaluation of the cause of abnormal uterine bleeding. Its purpose is to detect local lesions such as an endometrial polyp or malignancy and to obtain endometrium for histological examination.

Etiology of post-menopausal bleeding include: non-gynecological causes like trauma or a bleeding disorder, use of hormone replacement therapy, vaginal atrophy, endometrial hyperplasia (simple, complex, and atypical) or endometrial carcinoma. Other causes include endometrial polyps or cervical polyps, carcinoma of cervix, uterine sarcoma, ovarian carcinoma (especially estrogen-secreting ovarian tumors).3-7

The current study was carried out to evaluate various causes of postmenopausal bleeding based on histopathology, and the percentage of various benign, premalignant and malignant endometrial and cervical lesions in post menopausal bleeding.

MATERIAL AND METHODS

This retrospective study of endometrial pathology in postmenopausal bleeding was conducted by

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the Pathology Departament of the Obstetric and Gynecology Hospital of Arad, Romania, between January 2010 – December 2014.

We examined a number of 258 postmenopausal women that came with abnormal uterine bleeding on our hospital of Obstetric and Gynecology Arad, Romania. The material for the study was collected from the endometrial biopsies and hysterectomy specimens sent for histopathological examination to the Pathology Departament. Patients gave a history of postmenopausal bleeding varying from spotting per vagina, brownish discharge, scanty flow and moderate to profuse bleeding, appearing six months or more after menopause.

The sections were stained by routine hematoxylin and eosin (H&E) stain and microscopic evaluation and histogathology reporting were done according to standard criteria (23-25).

Exclusion criteria were premature menopause whether surgical or natural, age less than 55 years and patients on hormone replacement therapy. The endometrial biopsy material was immediately fixed in 10% fresh formalin. In the case of hysterectomy specimens, sections were taken from all the representative areas. The tissue pieces were processed routinely and were stained with hematoxylin and eosin. The histological findings were noted.

RESULTS

We examined a number of 258 postmenopausal women that came with abnormal uterine bleeding on our hospital of Obstetric and Gynecology Arad, Romania. The age of patients was ranged from 55 to 88 years.

In table I are shown the age groups evaluated and the number of cases for every age group. Maximum number of patients were in age group 55-60 years (37,99%).

Tabel 1. Distribution of study subjects according to age group

Age group	Number of cases	Percentage (%)
55 – 60	98	37,99
61 – 65	62	24,03
66 – 70	40	15,50
>71	58	22,48

The histopathological findings in the endometrium of women with abnormal uterine bleeding are shown in Table 2.

Tabel 2. Distribution of study subjects according to histological diagnosis

Histopathology	Number of cases	Percentage (%)
Atrophic endometrium	97	37,59
Chronic hypotrophic endometritis	11	4,26
Simple hyperplasia	18	6,97
Complex hyperplasia without atypia	15	5,81
Complex hyperplasia with atypia	7	2,71
Cystic glandular polyp	23	8,91
Fibrous glandular polyp	3	1,16
Myxomatous polyp	1	0,39
Hemangiomatous polyp	4	1,55
Endometrioid adenocarcinoma G1	15	5,81
Endometrioid adenocarcinoma G2	35	13,57
Endometrioid adenocarcinoma G3	6	2,33
Clear cell carcinoma G2	3	1,16
Clear cell carcinoma G3	5	1,94
Endometrioid ADK with areas of Clear cell carcinoma G2	4	1,55
Endometrioid ADK with areas of Clear cell carcinoma G3	2	0,78
Clear cell carcinoma with areas of serous adenocarcinoma G3	1	0,39
Adenosquamous carcinoma G1	2	0,78
Adenosquamous carcinoma G2	2	0,78
Serous carcinoma G3	2	0,78
Endometrial stromal sarcoma G3	2	0,78
TOTAL	258	100%

From the total of 258 cases, we find in 172 cases (66,66% of women) benign lesion and in 86 cases (33,34% of women) malign lesions.

From benign lesions atrophy of the endometrium was the most common finding in 97 cases (56,40% of benign lesions), followed by hyperplasia without atypia in 33 cases (19,18%) and polyps in 31 cases (18,02%).

From malign lesions endometrioid adenocarcinoma was the most common finding in 56 cases (65,12% of malign lesions), followed by clear cell carcinoma in 8 cases (9,30%), endometrioid adenocarcinoma with areas of clear cell carcinoma in 6 cases (6,98%) and complex hyperplasia with atypia in 7 cases (8,14%).

Figure 1 illustrates the rate of benign lesions as the underlying cause in different age groups in our population. The rate of atrophic endometrium was highest in age group 66-70 years. Endometrial hyperplasia, with or without atypia, was found in 15,50% of all patients, the highest incidence was of simple hyperplasia 6,98% of cases, followed by complex hyperplasia without atypia in 5,81% of cases, while complex hyperplasia with atypia was found in 2,71% of analised cases.

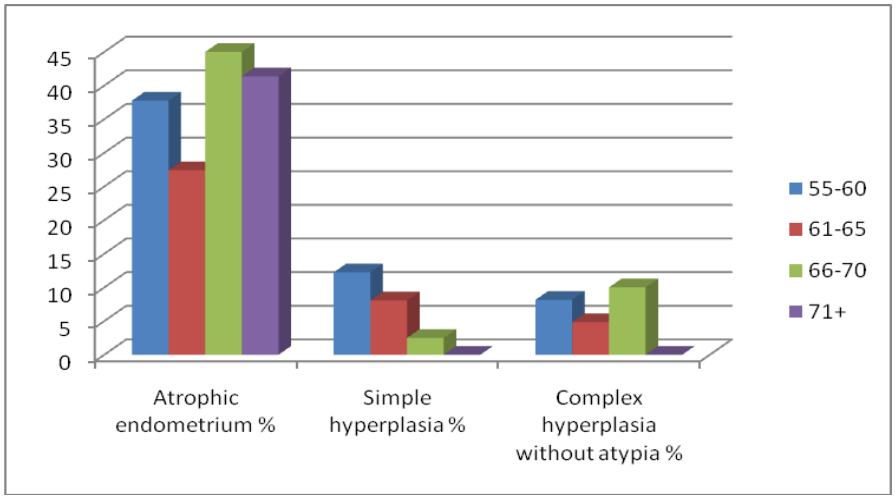

Figure 1. Distribution of benign lesions in different age groups

Figure 2 illustrates the rate of endometrial cancer as the underlying cause in different age groups in our population. The rate of endometrioid adenocarcinoma was highest in the age group >71.

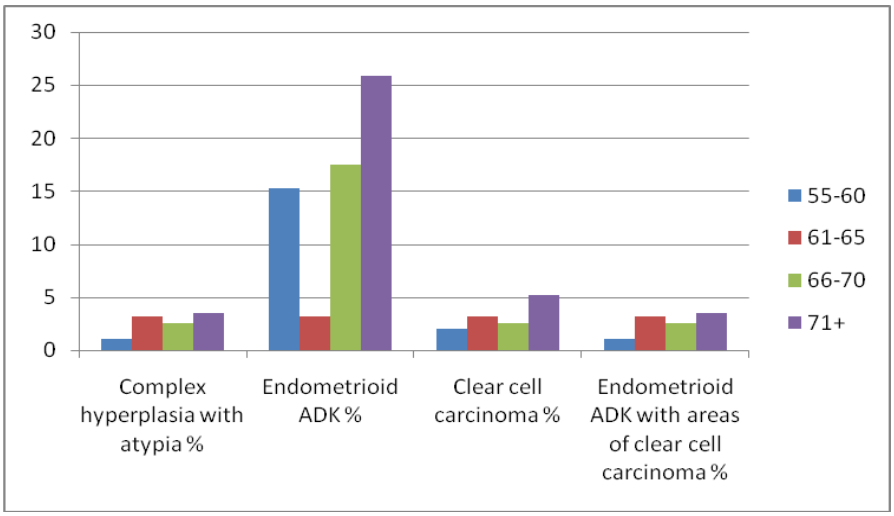

Figure 2. Distribution of type of neoplasms in differents age groups

Figure 3 illustrates the gradding of endometrioid adenocarcinoma in different age groups in our cases. The highest rate was for G2 endometrioid adenocarcinoma in the age group 61-65 years.

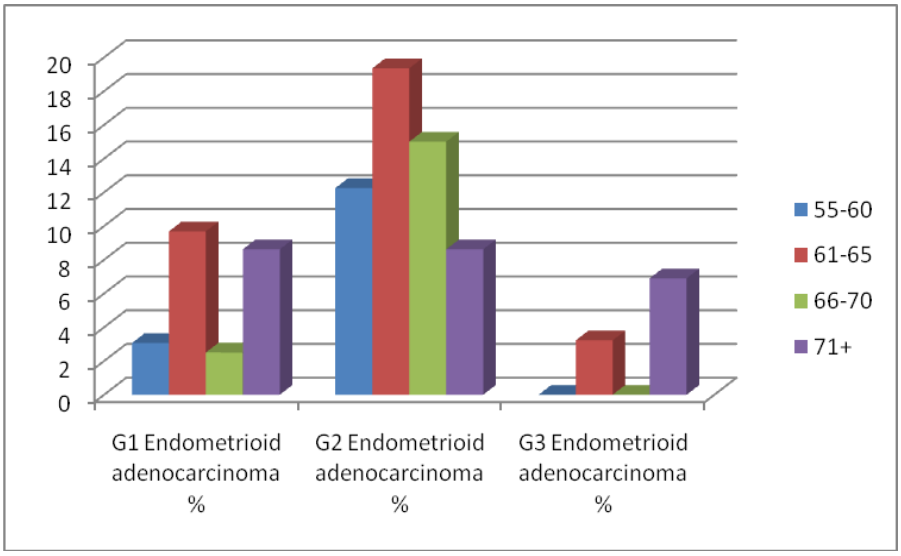

Figure 3. Distribution of type of endometrioid carcinoma in different age groups

DISCUSSION

Few analyses of the causes of uterine bleeding in postmenopausal women are based on representative populations. This study included all women presenting with uterine bleeding after the menopause in a defined health care region during a period of 4 years.

In our study atrophy of the endometrium and chronic hypotrophic endometritis was the predominant finding in the women in the postmenopausal period (41,85%), a figure which is comparable to that of a regional study in Sweden (50%) [15]. It is not known why some patients tend to bleed from an atrophic endometrium. Anatomical vascular variations or local abnormal haemostatic mechanisms in the uterus have been proposed as the mechanism [14,15].

The incidence of benign endometrial polyps (12,02%) in our study was lower than previous findings by Lidor et al. [4] and Gredmark et al. [15]. The estimated prevalence of polyps in women with postmenopausal bleeding ranges from 13% to 50%. Several studies have also shown that polyps are highly prevalent in asymptomatic postmenopausal women.

Adenocarcinoma of the endometrium was found in 27,52% of the samples. The incidence of endometrial carcinoma in studies published between 1985 and 2004 varied between 3.7% and 17.9% [16–18]; many of these reports focused on malignancy and, like our study, were based only on hospitalized women . Although the rate of postmenopausal bleeding declined with increasing age, the peak incidence of endometrial carcinoma occurred in the age group >71 years. An increasing incidence of uterine malignancy in women with age has been demonstrated before [19,20].

Endometrial hyperplasia, with or without atypia, is considered to be a precursor of carcinoma [13] and was found in about 15,50% of women in the present study. The relatively low incidence of hyperplasia as the cause of bleeding could be due both to the strict selection of postmenopausal women and to the fact that none had been treated with oestrogen replacement therapy.

CONCLUSIONS

This retrospective study of postmenopausal women with uterine bleeding showed that the number of women with postmenopausal bleeding decreased with increasing age, while the probability of endometrial cancer as the underlying cause increased. It is important to note that about 37,59% of the women with postmenopausal bleeding had an atrophic endometrium, which is similar to other parts of the world including this region (Europe).

Postmenopausal uterin bleeding is a symptom that should be carefully examined. A definitive diagnosis of
this type of hemorrhage is made by histology. In our study benign conditions like atrophic endometrium, endometrial hyperplasia without atypia, benign endometrial polyp predominated in 172 patients (66,66%). On histopathology endometrial atrophy was the commonest cause, followed by various endometrial hyperplasias with or without atypia, proliferative endometrium, cervical carcinoma.and endometrial adenocarcinoma.

Postmenopausal bleeding is a symptom of varied etiologies and is not always because of malignant conditions. Therefore, the histologic examination has to

be careful in order to find benign, premalignant and malignant lesions. An accurate diagnosis will make it much easier to counsel the patient confidently about the appropriate course of action and facilitate in carrying out the proper treatment plan that will benefit the patient.

REFERENCES:

1. Hawwa ZM, Nahhas WA, Copenhaver EH. Postmenopausal bleeding. *Lahey Clinic Foundation Bulletin*, 1970, 19:61–70.
2. Astrup K, Olivarius NDeF. Frequency of spontaneously occurring postmenopausal bleeding in the general population. *Acta Obstetricia et Gynecologica Scandinavica*, 2004, 83(2):203–7.
3. Pacheco JC, Kempers RD. Etiology of postmenopausal bleeding. *Obstetrics and Gynecology*, 1968, 32:40–46.
4. Lidor A et al. Histopathological findings in 226 women with postmenopausal bleeding. *Acta Obstetricia et Gynecologica Scandinavica*, 1986, 65:41–43.
5. Parazzini F et al. The epidemiology of endometrial cancer. *Gynecologic Oncology*, 1991, 41:1–16.
6. Norris HJ, Tavassoli FA, Kurman RJ. Endometrial hyperplasia and carcinoma. Diagnostic considerations. *American Journal of Surgical Pathology*, 1983, 7(8):839–847.
7. Alberico S et al. A clinical and epidemiological study of 245 postmenopausal metrorrhagia patients. *Clinical and Experimental Obstetrics and Gynecology*, 1989, 16:113–121.
8. Gordon MD, Ireland K. Pathology of hyperplasia and carcinoma of the endometrium. *Seminars in Oncology*, 1994, 21(1):64–70.
9. Hunter JE et al. The prognostic and therapeutic implications of cytologic atypia in patients with endometrial hyperplasia. *Gynecologic Oncology*, 1994, 55:66–71.
10. Escoffery CT, Blake GO, Sargeant LA. Histopathological findings in women with postmenopausal bleeding in Jamaica. *West Indian Medical Journal*, 2002, 51(4):232–235.
11. Goff BA et al. Uterine papillary serous carcinoma: patterns of metastatic spread. *Gynecologic Oncology*, 1994, 54:264–268.
12. Al-Kadri HM, Al-Awami SH, Madkhali AM. Assessment of risk factors of uterine cancer in Saudi patients with postmenopausal bleeding. *Saudi Medical Journal*, 2004, 25(7):857–861.
13. Caspi E, Perpinial S, Reif A. Incidence of malignancy in Jewish women with postmenopausal bleeding. *Israel Journal of Medical Sciences*, 1977, 13(3):299–304.
14. Fortier KJ. Postmenopausal bleeding and the endometrium. *Clinical Obstetrics and Gynecology*, 1986, 29:44–45.
15. Gredmark T, Havel G, Mattsson L-A. Histopathological findings in women with postmenopausal bleeding. *British Journal of Obstetrics and Gynaecology*, 1995, 102(2):133–136.
16. Kuwashima Y et al. Intramural carcinomas of the uterine corpus: a clinicopathological study. *In Vivo*, 1997, 11(3):253–260.
17. Ross JC et al. Primary mucinous adenocarcinoma. *Seminars in Oncology***,** 1994, 21:64–70.
18. Sherman ME et al. Uterine serous carcinoma. A morphologically diverse neoplasm with unifying clinicopathologic features. *American Journal of Surgical Pathology*, 1992, 16:600–610.
19. Hendrickson MR, Ross JC, Kempson RL. Towards the development of morphologic criteria for well differentiated adenocarcinoma of the endometrium. *American Journal of Surgical Pathology*, 1983, 7:819–838.
20. Abeler VM, Kjorstad KE. Endometrial squamous cell carcinoma: report of three cases and review of the literature. *Gynecologic Oncology*, 1990, 36:321–326.
21. Abeler VM, Kjorstad KE. Clear cell carcinoma of the endometrium: a histopathological finding and clinical study of 97 cases. *Gynecologic Oncology*, 1991, 40:207–217
22. Tjarks M, Van Voorhis BJ. Treatment of endometrial polyps. Obstet Gynecol 2000; 96:886–9.
23. Hendrickson, MR. and Kempson, R.L. The uterine corpus. in Diagnostic Surgical Pathology, edited by Sternberg, S.S., 2nd ed, New York, Raven Press Ltd, 1994, p. 21 10.
24. Silverberg, SG. and Kurman, R.J. Tumors ofthe uterine corpus and gestational trophoblastic disease. Washington, DC. Armed Forces Institute of Pathology, 1991.
25. Dallenbach—l-Iellweg, G. and Poulsen, H. Atlas ofendomctrial histopathology. Second ed. Verlag, Berlin, Heidelberg, Springer, 1996, p. 4.