Official Journal of the Irish Medical Organisation

Ir Med J; May 2025; Vol 118; No. 5; P73
May 29th, 2025

Endometrial cancer prevalence in women with an incidental finding of thickened endometrium

J. Stokes, T. Treacy, B. Adeniji, M. Geisler, C. Burke.

Department of Obstetrics and Gynaecology, Cork University Maternity Hospital (CUMH), Wilton, Co. Cork.

Abstract

Aim

The aim of this audit was to investigate the prevalence of endometrial carcinoma in asymptomatic women with incidentally-noted thickened endometrium.

Methods

This was a retrospective review of women who underwent ambulatory hysteroscopy at Cork University Maternity Hospital between 5th January 2017 and April 2023 for an incidental finding of thickened endometrium on some form of imaging modality. Clinic datasheets and histology reports were reviewed to ascertain the prevalence of endometrial carcinoma in this cohort.

Results

Histology results of 94 women with incidentally-noted increased endometrial thickness (ET) showed benign findings in 86 cases (91.5%). Three malignancies were diagnosed (3.2%), all of which were endometroid adenocarcinomas.

Discussion

An incidental finding of increased endometrial thickness in asymptomatic women often results in reflex investigation as for those with abnormal uterine bleeding, usually in the form of hysteroscopy and endometrial biopsy. There may be a potential for less investigation without compromising outcomes in this population of generally older women, often having multiple medical morbidities and anticoagulant use. It may be reasonable to omit additional investigations in those with no risk factors for malignancy. Studies involving larger patient numbers would lend further support to our data.

Introduction

Endometrial cancer is the most common gynaecological malignancy, with approximately 460

women diagnosed yearly in Ireland.[1] It is known that 80% of endometrial cancers occur in postmenopausal women[2,3] and ninety percent of women with endometrial cancer present with postmenopausal bleeding (PMB).[3,4] These figures highlight that although most endometrial cancers present clinically, there remains a proportion of asymptomatic women who will be diagnosed with endometrial cancer. When imaging reveals increased endometrial thickness in an asymptomatic woman, there is a tendency to investigate in the same manner as for women with PMB. In Ireland, the finding of an endometrial thickness of 4mm or above frequently triggers investigation, even if imaging has been done for a non-gynaecological presentation.[5] These investigations are not without risks, including uterine perforation, visceral injury, sepsis, and death.[6]

The Society of Radiologists in Ultrasound in the United States advises that an ET threshold for the investigation of women with PMB is not relevant to asymptomatic women.[7] The American College of Obstetricians and Gynaecologists issued advice in 2009 that there is no evidence to support routine investigations of increased endometrial thickness in the absence of symptoms.[8] Despite this ,risk factors for endometrial cancer including obesity, diabetes and family history must be considered.[3,9]

Studies examining rates of endometrial cancer in postmenopausal women without bleeding have shown different results.[3] Smith-Bindman estimated that 5-10% of all endometrial cancers occur in asymptomatic women.[10] This is at variance with other studies. A study of over 1000 asymptomatic women 45 years and above in New York in the 1980s found malignancy in 8 patients, equating to a 0.8% point prevalence.[11] In a 1997 study, endometrial adenocarcinoma was found in <0.07% of endometrial samples of almost 3000 peri- and postmenopausal women being screened while using hormone replacement treatment.[12] A post-mortem study found the incidence of occult endometrial cancer to be 22-31/10,000 women.[13] Various studies indicate a background prevalence of 0.6-6/1000 women.[3,11,12,13]. Furthermore, it remains unknown if a diagnosis of endometrial cancer made before bleeding occurred would be associated with a higher survival rate.[3]

Endometrial thickness can range from 3-15mm in a menstruating woman. The endometrial thickness is greater in the initial twelve months after the last period compared with several years later, due to falling estrogen levels postmenopausally.[3] At present there is no evidence to recommend screening for increased endometrial thickness in asymptomatic postmenopausal women.[3] Guidance from the British Gynaecological Cancer Society in 2021 is that ET has no value as a screening tool in asymptomatic women due to its poor diagnostic accuracy in those who are postmenopausal and asymptomatic.[14] The Irish National Clinical Guideline for the Investigation of Postmenopausal Bleeding advises that any patient with an endometrial thickness of 11mm or more, without bleeding, should be investigated as the risk

of endometrial cancer is higher in these cases (6.7%.) For those with an ET measurement between 4 and 11mm, individual risk factors should be assessed.[5]

The aim of this study was to examine the number of malignancies detected in asymptomatic women who were referred to an ambulatory hysteroscopy clinic with an incidental finding of increased endometrial thickness.

Methods

This was a retrospective review of women referred to the ambulatory gynaecology clinic for the indication of incidentally-noted endometrial thickening between January 2017 and April 2023. All patients undergoing ambulatory hysteroscopy during this period were identified using the PIMS booking system. Datasheets for all patients attending the clinic were reviewed to identify patients investigated for an indication of incidentally-noted endometrial thickening. Datasheets were cross-referenced with subsequent clinic letters through the hospital-based typing folder to identify the histological results of endometrial samples, if taken.

Study Protocol

A retrospective chart review was completed. Cases were identified, reviewed and the following variables were extracted and analysed; age, BMI, parity, endometrial thickness, histological findings.

Data analysis

Microsoft Excel (2019, Office 365) was used for analysis.

Results

Ninety-four patients with incidentally-noted endometrial thickening and accompanying histology results were identified.

Demographics

Table 1: Demographics of those with an incidentally increased endometrial thickness >4mm

	Range	Mean
Age	48-88	66.4 years
BMI	18-59.76	30.8

Parity	0-7	2.7
Endometrial thickness	4.4-31.5	12

Of 94 histology reports in patients with incidentally-noted endometrial thickening, 86 (91.5%) showed benign findings. Endometrial polyps were diagnosed in a third of patients (n=31, 32.9%). There were 2 cases of fibroid diagnosed (2.1%). In two cases, biopsy size was deemed insufficient for histological assessment (2.1%). Three endometrial malignancies were diagnosed (3.2%), all of which were endometroid adenocarcinomas. There was one diagnosis of atypical hyperplasia (1%).

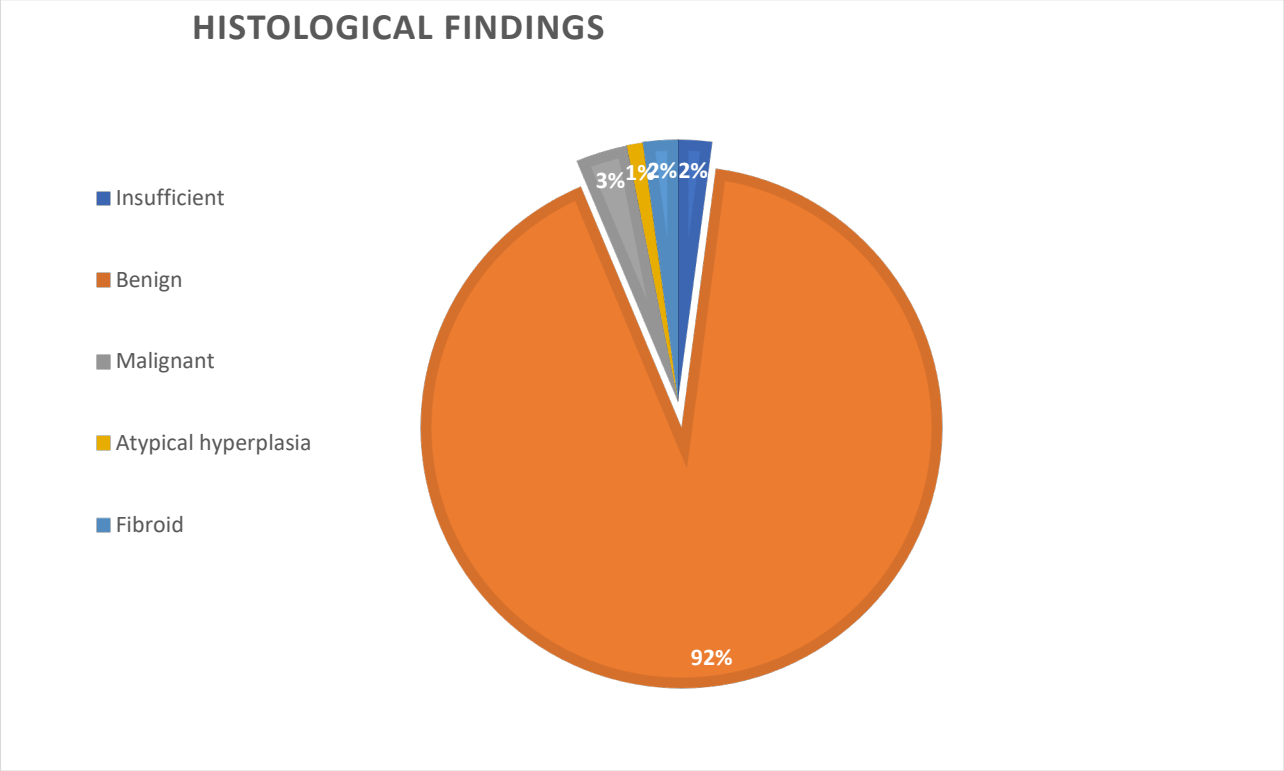

Figure 1: Histological results

Official Journal of the Irish Medical Organisation

Ir Med J; May 2025; Vol 118; No. 5; P73
May 29th, 2025

Discussion

Although the incidence of malignancy is low in women without abnormal uterine bleeding, early identification of endometrial cancer is ideal. Risk factors include ultrasound findings such as increased vascularity, inhomogeneity of the endometrium and endometrial thickness over 11mm[3]. Although ultrasound findings are important, other risk factors including tamoxifen use, obesity, age, late menopause, family history and hypertension should be assessed.[3]

Results from our study support similar previous studies, with adenocarcinoma being diagnosed in just 3.2% of women with incidentally-noted thickened endometrium. Two of the three cases of endometrial cancer identified were in women over the age of 70. This correlates with findings by Smith-Bindman et al. [10] who report that risk is related to age, especially those over 70 years of age, [3,10] Our findings are also in line with work by Maatela et al. who showed an increased risk of pathology with obesity.[15] Two of the three malignancies diagnosed in our cohort were in women with a BMI >30. One malignancy was in a patient with an ET of >11mm. Thus, all malignancies detected in our patient cohort would have been expected to have been identified on the basis of risk factors if age >70 years were considered a higher risk cut-off point.

Regarding atypical hyperplasia, the patient characteristics of the single case identified in our cohort included age of 65, a BMI of 29 and an endometrial thickness of 12mm. As the endometrial thickness was greater than 11mm investigation ensued as per national guidance and hyperplasia was detected. Our finding of atypical hyperplasia in a patient with an ET greater than 11mm supports the recommendation in the current national guidance.

Of 86 benign histological assessments, 31 cases of endometrial polyps were noted (32.9%). The SOGC states that the prevalence of polyps in those with post-menopausal bleeding ranges from 13-50%.[3,16] Polyps are known to be common in asymptomatic postmenopausal women.[3,17] Although the majority are benign, some may be pre-malignant or malignant and cancer is detected in 0.5-4.8% of postmenopausal polyps.[16,18] Recent research has identified that obesity (BMI >30), age over 60 years, diabetes and menopause were risk factors for malignancy in endometrial polyps.[19]

The benefits of rationalising investigations in those with an incidentally-noted increased ET are medical, financial and psychological. In the older patient group there may be medical morbidities including frailty, diabetes, hypertension or anticoagulation use. A review of 13,600 hysteroscopies reported a complication rate of 0.13% for diagnostic hysteroscopy, with uterine perforation in 0.76% and bleeding secondary to perforation occurring in 0.16%

of cases. The study found operative hysteroscopies were riskier, however diagnostic hysteroscopy ending with complications such as perforation can increase the need for hospital admission and antibiotic use.[6] By reducing the number of hysteroscopies and endometrial biopsies, resources can be better directed to investigating those with a higher probability of malignancy. Finally, by limiting investigations patients may benefit from reduced concern or worry in relation to awaiting investigations and histology results.

The main strength of this study is that it relates to a distinct cohort of patients who may benefit from a different approach to management than women with PMB. Despite relatively small case numbers, our results support other studies suggesting that individuals with an increased ET who are asymptomatic and without risk factors for endometrial malignancy do not warrant further investigation. The main limitation of this study lies in the relatively small number of cases examined. Assessing more cases with incidentally-noted increased ET and confirming the small chance of sinister pathology could bring change to clinical practice and limit the number of unnecessary investigations completed.

In conclusion, our study supports the recommendations of guidelines from the IOG and SOGC including avoiding routine screening in asymptomatic women and assessing incidental ultrasound findings on an individual and risk-based basis.[3,5] The aim should be to limit those with asymptomatic endometrial thickening from entering the same urgent investigative pathway as those with PMB. Over-investigation creates burden on healthcare resources and limitations for the already well determined pathway for PMB patients. By inappropriately over-saturating this pathway, management of both cohorts will be affected. Looking to future research, similar work with a larger sample size or a multi-centre cohort to allow for population differences would further support this. We suggest on the basis of our findings that patient age >70 be considered a trigger for further investigation in women with thickened endometrium but no abnormal bleeding, and could be considered for inclusion in the next iteration of the Irish guidelines on the management of PMB.

Declarations of Conflicts of Interest:
None declared.

Corresponding author:
Jenny Stokes,
Department of Obstetrics and Gynaecology,
Cork University Maternity Hospital (CUMH),
Wilton,
Co. Cork,

Ireland.
E-Mail: jestokes@tcd.ie

References:

1. https://www.mater.ie/services/gynaecological-oncology/endometrial-cancer-information.pdf
2. Gallup DG, Stock RJ. Adenocarcinoma in women 40 years of age or younger. Obstetr Gynecol. 1984;64:417-20.
3. Society of Obstetricians and Gynaecologists of Canada. Clinical Practice Guideline: Asymptomatic Endometrial Thickening. J Obstet Gynaecol Can 2010; 32(10): 990-999.
4. American College of Obstetricians and Gynaecologists. Practice bulletin: Clinical Management Guidelines for Obstetrician-Gynaecologists, number 65, August 2005; Management of Endometrial Cancer. Obstet Gynaecol 2005;106 (2):413-25.
5. Duffy, A., Ni Bhuinneain, M., Burke, N., Murphy, C. National Clinical Practice Guideline: Assessment and Management of Postmenopausal Bleeding. National Women and Infants Health Programme and the Institute of Obstetricians and Gynaecologists. December 2022.
6. Jansen FW, Vredevoogd CB, van Ulzen K, Hermans J, Trimbos JB, Trimbos- Kemper TC. Complications of hysteroscopy: a prospective multicenter study. Obstet Gynecol 2000 Aug;96(2): 266-70.
7. Goldstein RB, Bree RL, Benson CB, Benacerraf BR, Bloss JD, Carlos R, et al. Evaluation of the woman with postmenopausal bleeding: Society of Radiologists in Ultrasound-sponsored consensus conference statement. J Ultrasound Med 2001;20:1025–36.
8. American College of Obstetricians and Gynaecologists. The role of transvaginal ultrasonography in the evaluation of postmenopausal bleeding. ACOG Committee Opinion No. 426. Obstet Gynecol 2009;113:462–4.
9. Goldstein SR. Modern evaluation of the endometrium. Obstet Gynecol 2010; 116:168–76.
10. Smith-Bindman R, Kerlikowske K, Feldstein V, Subak L, Scheidle J, Segal M, et al. Endovaginal ultrasound to exclude endometrial cancer and other endometrial abnormalities. JAMA 1998;280:1510–7.
11. Koss L, Schreiber K, Oberlander S, Mamdouh M, Herbert, S. Screening of asymptomatic women for endometrial cancer. CA Cancer J Clin 1981;31:300–17.
12. Korhonen MO, Symons JP, Hyde BM, Rowan JP, Wilborn WH. Histologic classification and pathologic findings for endometrial biopsy specimens obtained from 2964 perimenopausal and postmenopausal women undergoing screening for continuous hormones as replacement therapy (CHART 2 Study). Am J Obstet Gynecol 1997;176:377–80

13. Horwitz RI, Horwitz SM, Feinstein R, Robboy SJ. Necropsy diagnosis of endometrial cancer and detection-bias in case/control studies. Lancet 1981;2(8237):66–8
14. Morrison J et al. British Gynaecological Cancer Society (BGCS) Uterine Cancer Guidelines: Recommendations for Practice 2021. Accessed at https://www.bgcs.org.uk on June 1st, 2022
15. Maatela J, Aromaa A, Salmi T, Pohja M, Vuento M, Gronroos M. The risk of endometrial cancer in diabetic and hypertensive patients: a nationwide record-linkage study in Finland. Ann Chir Gynaecol Suppl 1994;208:20–4.
16. Antunes A, Costa-Paiva L, Arthuso M, Costa JV, Pinto-Neto AM. Endometrial polyps in pre- and postmenopausal women: factors associated with malignancy. Maturitas 2007;57:415–21.
17. Tjarks M, Van Voorhis BJ. Treatment of endometrial polyps. Obstet Gynecol 2000; 96:886–9.
18. Ferrazzi E, Zupi E, Leone FP, Savelli L, Omodei U, Moscarini M, et al. How often are endometrial polyps malignant in asymptomatic postmenopausal women? A multicenter study. Am J Obstet Gynecol 2009;200:1–6.
19. Gregoriou O, Konidaris S, Vrachnis N, Bakalianou K, Salakos N, Papadias K, et al. Clinical parameters linked with malignancy in endometrial polyps. Climacteric 2009; 12:454.