Screening for Endometrial Cancer

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Declaration of interests

- None
Introduction

- EC more common in industrialized countries:
  - North America ASR 16.4 per 100,000
  - Africa ASR 2.6 per 100,000
- Disease of predominantly PM women:
  - 93% in women >50 years of age
  - Peaks in early 70’s
- Incidence risen in recent years:
  - Greatest increases 60-79 year age group
- Risk factors: unopposed estrogen key driver
• The American Cancer Society recommends that at the time of menopause, all women should be told about the risks and symptoms of endometrial cancer. Women should report any unexpected vaginal bleeding or spotting to their doctors.

• Some women—because of their history—may need to consider having a yearly endometrial biopsy. Please talk with a health care provider about your history.
Screening for EC

- Screening not advocated in low-risk population:
  - 95% become symptomatic
  - Still early stage and curable
- Abnormal vaginal bleeding most common presentation
Appropriate management of women presenting with postmenopausal bleeding to allow early detection of EC
Postmenopausal bleeding

- Definition
- How common is PMB?
- Is it important?


- What is the aim of assessment?
Differential diagnosis

- Systemic
  - Bleeding disorders
  - Exogenous estrogens
  - Endogenous estrogens
- Local
  - Benign
  - Malignant/Premalignant
Clinical assessment

“Shall we begin?”
How did we manage 30 years ago?
How did we manage 30 years ago?
Dilatation and curettage

• 10% of lesions missed
• Incomplete sampling of endometrial cavity
• Invasive
• Risk of complications

Uterus

Endometrium

Longitudinal view of uterus during transvaginal ultrasound
Office sampling
Saline infusion sonohysterography
Office hysteroscopy
TVUS

- Exclude endometrial cancer (EC)
- Introduced mid 1980's
- Endometrial thickness (EL) ≈ histology
- EL ≤ 5mm = inactive endometrium
- Only 1 cancer with EL = 5mm


Value lies in excluding disease
TVUS – Meta-analysis

- 35 studies
- 2x2 tables: measured EL against presence/absence of EC
- 5mm threshold:
  - Sensitivity 96%
  - Specificity 61%
  - Post-test probability for EC 1%


Conservative management recommended if ET ≤5 mm
TVUS – Meta-analysis

- 9 studies (original data supplied)
- Median EL per center
- Results comparable to previous meta-analysis
- Conclusion: 4% false-negative rate unacceptable

TVUS – Meta-analysis

- 57 studies
- 8890 patients
- 1243 cases of EC
- 4mm threshold:
  - 1.2% post-test probability of EC
- 5mm threshold:
  - 2.3% post-test probability of EC


TVUS has limited diagnostic prediction of EC
BUT the exclusion of endometrial pathology of EC
Good test for the exclusion of the possibility of EC

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TVUS – Meta-analysis

- Combined individual patient data
- Threshold ≤4mm:
  - Sensitivity of 95%
  - Specificity of 47%
  - Post-test probability 1.2%
- Threshold ≤3mm:
  - Sensitivity of 98%
  - Specificity of 35%
  - Post-test probability 0.7%
  - LR for negative test result of 0.06

TVUS - Technique
TVUS - Technique
TVUS in asymptomatic PM women

- EL >4.5mm in 10-17% of PM women
- EL thicker in first year after LMP
- EC 1.3-1.7/1000
- PPV ≤3.3% for detection of EC
- High false positive rate
- 1.3-3.6% risk of serious complications with removal of polyps

Routine screening for EC via TVUS not recommended
Office endometrial sampling

- Pipelle on 40 patients with EC
- Sensitivity of 97.5%


- Three meta-analysis early 2000’s:
  - Sensitivity for EC ≈ 99%
  - Sensitivity for hyperplasia ≈ 80%
  - D & C as reference standard

Office endometrial sampling

- Hysteroscopy with histology as reference standard
- Sensitivity:
  - EC: 90%
  - Atypical hyperplasia/EC: 82%
  - Any endometrial pathology: 39%
- Specificity: 98-100%


Positive test result very accurate

Benign result warrants further diagnostic work-up

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Office sampling

- “Non-diagnostic” test:
  - Inadequate tissue
  - Procedure failure
  - 5-20% atypical hyperplasia/EC


- Fail to identify focal pathology

Saline infusion sonohysterography

- Sensitivity of 95%
- Specificity of 88%
- No calculations for EC
- Not separately described for pre- and postmenopausal women
- Success rate 87%

Office hysteroscopy
Office hysteroscopy

- Accuracy in diagnosis of hyperplasia and EC:
  - + result increase EC probability to 71.8%
  - - result reduce EC probability to 0.06%


- Accuracy in diagnosis of hyperplasia and endometrial abnormalities:
  - Sensitivity of 96%
  - Specificity of 90 %
  - + result increase post-test probability to 93%

Office hysteroscopy

- **Success rate 95.6-96.9%**
  

- **Low complication rate**
  

- **Unreliable without biopsy**
  
Conclusions

• TVUS accurate to exclude EC
• Best threshold – 3/4/5mm?
• Sequence of tests dependent on many factors:
  • Cost-effectiveness
  • Prevalence of EC
  • Local logistics
  • Doctor and patient preferences
Thank you very much for your attention