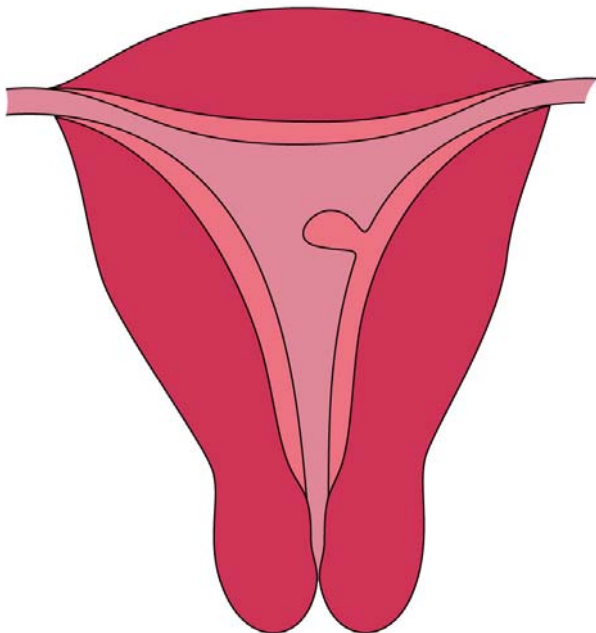


# ENDOMETRIAL POLYPS

Prevalence, ultrasonographic aspects,  
and associated factors

PhD thesis

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## Summary

The PhD thesis is based on three original papers. The studies were carried out during my employment as a research fellow at the Department of Obstetrics and Gynecology, Glostrup Hospital, University of Copenhagen.

Endometrial polyps (EP) are focal outgrowth of the endometrial basalis layer of the uterus. The clinical importance of EP remains unclear since EP occur both in women with and without symptoms. The prevalence of EP in a general population is unknown, and the diagnostic value of measurement of endometrial thickness for diagnosing focal intrauterine pathology has not been evaluated in asymptomatic women. Risk factors associated with EP have only been sparsely investigated.

The aims of the study were:

- To estimate the prevalence of polyps in a Danish general population.
- To assess the diagnostic value of transvaginal sonographic measurement of endometrial thickness for diagnosing focal intrauterine pathology in women without abnormal uterine bleeding (AUB).
- To identify factors associated with endometrial polyps.

After random selection from the Danish Civil Registration System (CPR); 1660 women aged 20–74 years, were invited to fill in a validated questionnaire and undergo clinical examinations, including transvaginal sonography (TVS) and saline infusion sonohysterography (SIS). Hysteroscopic resection with histopathology (gold standard) was performed, when focal intrauterine pathology was suspected at SIS.

In total 686 women were eligible and accepted inclusion (429 pre- and 257 postmenopausal).

Full evaluation was performed in 619 women. The prevalence of EP was 7.8% (48/619). The prevalence was significantly influenced by age. Polyps were diagnosed in 5.8% of pre- and 11.8% postmenopausal women ( $p < 0.01$ ). AUB was significantly more frequent among women without polyps than those with polyps (38% vs. 19%  $p < 0.01$ ).

In 375 women (217 pre- and 158 postmenopausal) without AUB the diagnostic value of TVS measurement of endometrial thickness (ET) for diagnosing focal intrauterine pathology was assessed. Receiver operating characteristics (ROC) curves and likelihood ratios were evaluated. For premenopausal women the best negative likelihood ratio (LR=0.11) was obtained at ET=5.2 mm, the negative predictive value (NPV) was 99%, the positive predictive value (PPV) was 10% at this threshold. For postmenopausal women the best LR- (LR=0.08) was obtained at ET=2.8 mm, the NPV was 99%, the PPV was 26%. Consequently, the test was somehow efficacious, especially in postmenopausal women to exclude focal intrauterine pathology, but TVS measurement of ET was a poor test in diagnosing focal intrauterine pathology; the PPVs varied between 10–36% in premenopausal, and 26–70% in postmenopausal women.

Factors associated with EP were analyzed in a case-control study, including 140 women with EP and 367 controls without polyp or other focal intrauterine pathology. Data on cases and controls were obtained from the population-based study and 94 women consecutively admitted to the department with EP. Information on potential associated factors was obtained from the questionnaire. In an age-adjusted logistic regression model the following was positively associated with EP: current use of hormone therapy (OR=2.81) and being overweight (BMI > 25 kg/m<sup>2</sup>) (OR=2.06) (postmenopausal women). Negatively associated was the use of oral contraceptives (OR=0.20). EP were infrequently related to premalignant and malignant pathology; benign EP were diagnosed in 96%, polyp with hyperplasia in 2% and benign polyp with concomitant complex hyperplasia/endometrial cancer 2%.

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