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Endometrial Cancer: Using Evidence to Impact Practice and Policy

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ABSTRACT

Endometrial cancer is the most commonly diagnosed gynecologic malignancy in the United States. Incidence and death rates have increased over the past decade, which highlights the urgent need to identify ways to reverse this trend. In this paper we present a comprehensive update on endometrial cancer and assess ways to advance practice and policy. Although the Affordable Care Act has expanded access to health care for women, crucial implications exist regarding improving timely access for early detection and treatment of gynecologic cancers, including endometrial cancer.

Keywords: endometrial cancer, postmenopausal bleeding and heavy menstrual bleeding, health policy, women's health, unopposed estrogen

INTRODUCTION

Endometrial cancer (EC) is the most common gynecologic malignancy in the United States. Nearly 55,000 new cases of endometrial cancer and > 10,000 deaths had been projected for 2015.[1] EC accounts for about 7% of newly diagnosed cancer, and about 4% of overall cancer deaths in women.[1] With a median age of diagnosis at 60 years, EC is largely a disease of postmenopausal women. However, about 5% of women are diagnosed with EC before age 40, and about 20% are perimenopausal at diagnosis.[2] Women of all races are diagnosed with the disease; however, more Caucasian women receive the diagnosis, followed by African-American and Hispanic women. Although more Caucasian women are diagnosed with EC, more African-American women are at a greater risk of dying from the disease.[1]

Incidence of EC has been relatively stable for many years, but recent changes have been observed. For example, in the 5-year period from 2007 to 2011, the incidence rate has increased by 2.4% each year.[2] During the same 5-year period, death rates for EC have increased by 1.9% each year.[2] Rising obesity rates in the US represent the greatest risk factor.[1] Because many women seek care from primary care providers before referral to an oncologist, crucial implications exist regarding improving timely access for early detection and treatment of gynecologic cancers, including EC.

The purpose of this study is to: (1) describe the risk factors for EC; (2) discuss treatment options, prognosis, and survivorship concerns for patients diagnosed with EC; (3) discuss EC prevention strategies; and (4) examine ways nurse practitioners (NPs) can advocate for patients in the primary care setting to help improve early detection of EC and to influence policy changes at the state and national levels that impact earlier referrals to oncologists.

CLINICAL VIGNETTES

Commonly observed case scenarios of female patients with EC risk factors are provided with the intent of helping the reader understand the importance of knowing who should be evaluated and when. Each clinical vignette includes realistic situations encountered in women across the lifespan with EC risk factors.

Young Reproductive-age Woman With Amenorrhea

Case scenario: A 19-year-old G0 morbidly obese Caucasian female with a history of irregular menstrual cycles presents to the primary care clinic after the absence of her period for 10 consecutive months. She does not have health insurance; therefore, she waited an extended length of time to schedule an appointment with a women's health nurse practitioner at a federally qualified health center. Endometrial biopsy confirmed a diagnosis of EC and she was referred to a gynecologist-oncologist, where she received successful treatment for stage I EC.

Perimenopausal Reproductive-age Woman With Heavy, Irregular Menstrual Bleeding

Case scenario: A 46-year-old G2P2103, overweight, Hispanic perimenopausal female with diabetes presents to her primary care provider concerned about recent changes in her menstrual cycle. She reports heavy, irregular menstrual bleeding for the past 7 months. She was referred to a gynecologist who surgically diagnosed her with stage II EC. An oncologist referral was made and she was treated successfully with radiation.

Postmenopausal Woman With Spotting and Bleeding

Case scenario: A 65-year-old G0 African-American postmenopausal widow presents to her primary care provider for her annual examination reporting, "I think my period is trying to come back. I've been spotting and bleeding intermittently for the past 6 months." Menopause was diagnosed at age 55 years. She never used anything for vasomotor symptoms and is not sexually active. A referral to a women's health nurse practitioner for an evaluation was scheduled where an endometrial biopsy and ultrasound confirmed the diagnosis of EC. The woman was diagnosed with stage III EC by a gynecologist and was referred to a gynecologist-oncologist for successful treatment with chemotherapy and radiation.

RISK FACTORS

Risk factors associated with EC are related to the type (Table 1). Three classifications are used to describe endometrial cancer. Type I is most commonly diagnosed and is caused by excess exposure to estrogen. It contributes to approximately 80% of cases.[3] Specific risk factors have been identified in the research for type I. This type is typically not very aggressive and tends to metastasize slowly, whereas type II is typically more aggressive in nature and often has a less favorable prognosis. Type II accounts for only about 10% of cases diagnosed and is associated with spontaneously occurring neoplasms.[3] Type III is referred to as familial EC,[3] and accounts for about 10% of cases diagnosed.[3]

Table 1. Risk Factors for Endometrial Cancer Types I, II, and III

Type I (Excessive Estrogen Exposure)	Type II (Neoplasms)	Type III (Familial)
Obesity	Atrophic endometrium	Lynch syndrome
Diabetes	Endometrial polyps	Cowden syndrome
High-fat diet	Multiparous	
Excessive estrogen exposure		
Exogenous estrogen		
Unopposed estrogen therapy		
Tamoxifen		
Endogenous estrogen		
Early menarche (age < 12 years)		
Chronic anovulation		
Infertility		
Nulliparity		

Risk factors for type I include: unopposed estrogen; selective estrogen receptor modulators; reproductive characteristics; obesity; diabetes; and high-fat diet. Obesity is associated with a major increase in the incidence of EC (discussed later). Reproductive risk factors include nulliparity, infertility, early menarche, and late menopause. Because of its estrogenic effects on the uterus, tamoxifen use also carries an increased risk of EC among women with breast cancer.[1]

Risk factors for type II are not well known, but are thought to include the presence of an atrophic endometrium or an endometrial polyp.[2] A multiparous state is also associated with type II EC.[2]