Available online at www.sciencedirect.com

SCIENCE DIRECT

Gynecologic Oncology 98 (2005) 254 – 262

Gynecologic Oncology

www.elsevier.com/locate/ygyno

Clinicopathologic review of malignant polyps in stage 1A carcinoma of the endometrium

R. Farrell[a], J. Scurry[b,*], G. Otton[c], N.F. Hacker[a]

[a]*Gynaecological Cancer Centre, Royal Hospital for Women, Sydney, Australia*
[b]*Nextpath, Suite 1, 24 Brown Road, Broadmeadow, NSW 2292, Australia*
[c]*Hunter Centre for Gynaecological Cancer, John Hunter Hospital, Newcastle, Australia*

Received 10 January 2005
Available online 3 June 2005

Abstract

Objectives. The aims of this study were to determine the incidence of malignant polyps in stage 1A endometrial cancer, to define the pathological features of such cancers, and to assess whether clinical outcome differs from similar cancers without a malignant polyp.

Methods. We performed a retrospective pathological review of 107 cases of stage 1A endometrial cancer treated at two centers in New South Wales between January 1988 and July 2003. The presence of a malignant polyp was determined and a pathological description made of the tumor. Clinical data were collected, including prior tamoxifen usage, tumor recurrence and survival. The outcome of the malignant polyp group was compared to the same histological subtype not involving a malignant polyp.

Results. The incidence of malignant polyps in our series was 32%. Malignant polyps occurred in all 8 cases involving a serous subtype. Precursor lesions of endometrial cancer were identified within malignant polyps. Three out of the four recurrences occurred in high-grade tumor subtypes and all four had a large primary tumor (size $\geq$ 4 cm). When comparing the same subtype of tumor with and without a malignant polyp, there was no significant difference in clinical outcome.

Conclusions. Approximately one-third of stage 1A endometrial cancers are associated with a malignant polyp. Serous carcinoma commonly arises within an otherwise benign endometrial polyp. Malignant polyps offer an opportunity to identify precursors of endometrial carcinoma. Clinical outcome of stage 1A endometrial carcinoma was related to the histological subtype and the size of the tumor rather than the presence of a malignant polyp.

Keywords: Cancer; Endometrium; Polyp; Stage 1A; Malignant; Serous carcinoma; Endometrioid carcinoma; Tamoxifen

Introduction

With the increased use of ultrasonography and hysteroscopy to evaluate symptomatic patients and, under certain circumstances, screen asymptomatic women at risk of endometrial cancer, more endometrial polyps are being found. Studies have shown that 0.45–3.2% of endometrial polyps harbor a malignancy, with most studies recording a figure of around 1% [1,2]. However, these studies do not tell us the importance of endometrial polyps in endometrial cancer. For that, we need to know the proportion of endometrial carcinomas that begin in benign endometrial polyps. This information has not yet been published.

Do malignant polyps differ from malignancy not arising in a polyp? It is well known that serous carcinomas are apt to arise in polyps [3–5]. These have been shown to have a worse prognosis than other types of carcinoma [6]. But, are there any differences between similar type carcinomas that begin in a polyp compared to those that do not? Malignant polyps may be large, yet low stage and may have access to an abnormal lymph vascular system. Are these factors of prognostic importance? This question has never been studied.

* Corresponding author.
E-mail address: jscurry@bigpond.com (J. Scurry).

0090-8258/$ - see front matter © 2005 Elsevier Inc. All rights reserved.
doi:10.1016/j.ygyno.2005.03.044

More fundamentally, examining malignant endometrial polyps may give some clues as to why otherwise benign polyps are associated with malignancy and what the precursors of endometrial cancer may be. In particular, there is a need to find an earlier precursor lesion than endometrial intraepithelial carcinoma (EIC) for serous carcinoma. The diagnosis of EIC is too late for some patients, as this disease may metastasize before myometrial invasion occurs [4–7].

Following institutional review board approval, we reviewed 107 stage 1A endometrial carcinomas to determine how many were located in malignant polyps. We then compared the clinical history and outcome of cancers with malignant polyps to similar subtype cancers not associated with polyps.

Materials and methods

Clinical databases were used to identify all women with stage 1A endometrial cancer referred to either the Gynaecological Oncology Centre at the Royal Hospital for Women (Sydney) or the John Hunter Hospital (Newcastle) in a 15-year period between January 1988 and July 2003. All histological subtypes of endometrial carcinoma were selected for review. Carcinosarcomas were included in our series as there is now ample evidence that they represent poorly differentiated tumors of epithelial origin [8].

Clinical data were obtained retrospectively from individual medical records and from the multidisciplinary tumor board notes. Data collected are age, surgical management, adjuvant treatment, prior hormonal treatment (including tamoxifen), episodes and sites of tumor recurrence and time periods of recurrence, follow-up and survival. The presence of other synchronous gynecological tumors at the time of surgery was noted. Tumor recurrences were confirmed by contact with the NSW Cancer Registry database. A review of post-mortem reports was performed where a tumor recurrence was deemed to be the cause of death.

Pathology reports and slides of the hysterectomy specimens were reviewed together by both a pathologist (JS) and a clinical author (RF). The presence of a malignant polyp, a polypoid carcinoma, or neither was recorded using distinct pathological definitions described herein. If the diagnosis of malignant polyp was made from the endometrial curetting, the specimen was reviewed to confirm this finding.

The histological subtype, grade, site and size of the tumor were recorded. The presence or absence of carcinoma and/or complex atypical hyperplasia in the surrounding endometrium was noted.

The cancers were staged according to FIGO and typed according to the WHO [9]. Hyperplasias were classified according to WHO [9].

A malignant polyp was defined as a malignancy occurring within an elevation above the endometrial surface, in which there is evidence of a benign polyp (Fig. 1).

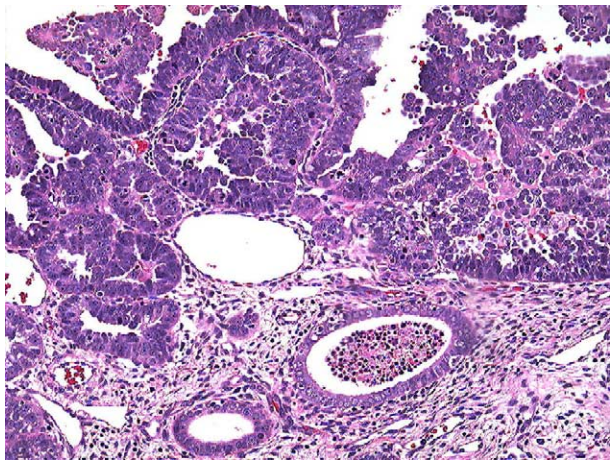

Fig. 1. Malignant polyp. Serous carcinoma is seen invading the fibrous stroma and inactive glands of a pre-existing benign polyp.

Evidence of a benign polyp is taken as the presence of benign or hyperplastic glands and fibrous stroma, supported by a bundle or leash of large vessels [10].

A malignant polyp was distinguished from a polypoid cancer, which was defined as a raised lesion above the endometrial surface showing malignancy and no evidence of a benign polyp (Fig. 2). While virtually all endometrial carcinomas are polypoid to some extent, in this study we restricted the term “polypoid cancers” to those occurring on a non-raised background endometrium, as we felt that this type of polypoid cancer may have clinical relevance to ultrasonographic and/or hysteroscopic diagnosis.

Data were entered into a computerized database and analyzed using SPSS software. Logistic regression analysis was used to assess the association of malignant polyps to different grades of endometrioid cancer and to tamoxifen usage.

Results

There were 107 cases of stage 1A endometrial carcinoma identified and reviewed.

Clinical information

The age range was 35–85 years. The mean age was 61.3 years.

Hormonal therapy had previously been taken by 30 women (28%), the majority having taken combined estrogen and progesterone for an average of 7 years. Two women, both with grade 1 endometrioid cancer, had taken unopposed estrogen for a total of 6 and 10 years before diagnosis of their carcinoma. A total of 7 women had been treated previously with tamoxifen for breast cancer at a dose of 20 mg/day. Three women had taken tamoxifen for longer than 5 years for a period of 70, 84 and 108 months, respectively. Of the seven women who had taken