Case Report

Received: September 23, 1993

Accepted: December 2, 1994

Gynecol Obstet Invest 1995;40:64-65

Vaginal Scan for Identifying Endometrial Abnormalities: Limitations in Clinical Management

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Key Words

Endometrial thickness

Endometrial cancer

Vaginal scan

Abstract

It is generally recognized that an endometrial thickness of 4–8 mm is considered a definite cutoff point for detection of endometrial malignancy by transvaginal sonography. We report on 2 patients with endometrial cancer and on 1 with endometrial hyperplasia, in each of whom endometrial thickness was < 4mm.

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Introduction

Transvaginal sonography (TVS) is capable of producing clear images of the uterus because of the proximity of the uterus to the vagina and is considered useful in screening for endometrial malignancy. Granberg et al. [1] reported that 70% of diagnostic curettage procedures could have been avoided with the use of TVS. It is generally recognized that the endometrium in postmenopausal women may be thin and that a thickness of 4–8 mm is a distinct cutoff point in screening for endometrial abnormalities with TVS [2–6]. In the following we report on 2 patients with endometrial cancer and on 1 with endometrial hyperplasia, in each of whom the endometrial thickness was < 4 mm.

Case Reports

Case 1 ,

An 84-year-old woman presented with vaginal bleeding 31 years after the menopause. She underwent TVS with a 5-MHz vaginal probe which demonstrated an atrophic uterus (uterine length 5.3 cm)

with a thin endometrium (2 mm). Dilatation and curettage was performed, and histopathological examination of the specimens revealed endometrial cancer. She underwent simple total hysterectomy and bilateral salpingo-oophorectomy. Examination of the sectioned specimen revealed a small polypoid tumor of the fundus (stage Ia adenocarcinoma, grade III). There was no evidence of myometrial invasion.

Case 2

A 61-year-old woman was referred to our hospital with abnormal vaginal bleeding. TVS disclosed an endometrium of 3 mm in thickness. Dilatation and curettage was performed immediately, and endometrial cancer was detected. The patient underwent radical hysterectomy, bilateral salpingo-oophorectomy, and regional lymph-adenectomy, and the presence of a stage Ia endometrial adenocarcinoma (well differentiated, grade I) was confirmed on histological examination. There was no evidence of myometrial invasion or lymph node metastases.

Case 3

A 69-year-old asymptomatic woman underwent routine TVS which demonstrated an uterus of normal size and an endometrium 3 mm in thickness. Fractional curettage was performed which yielded a small amount of endometrial tissue. Histological examination revealed glandular hyperplasia of the endometrium. Due to TVS and histological findings, follow-up has continued up to the present.

Discussion

Many authors have reported that the cutoff point for detection of endometrial malignancy by TVS is 4-8 mm [1-6]. However, we have treated 2 patients with endometrial cancer and 1 with hyperplasia in whom the endometrial thickness was < 4 mm. Endometrial assessment was made as described by Fleischer and Entman [6]. Two hypotheses may be offered to explain our findings:

The women investigated in the above-mentioned studies were of European ancestry, while our patients were Japanese. The discrepancy between our findings and those of previous studies may be the result of a difference in mean endometrial thickness between European and Japanese women.

Bockman [7] stated that there were two different pathogenetic types of endometrial carcinoma.

The first

type arises in women with obesity, hyperlipidemia, and signs of hyperestrogenism, while the second type arises in women who have none of these signs. The second type of endometrial cancer develops in a hormone-independent manner from an atrophic endometrium and results in poorly differentiated adenocarcinoma (grade III; 62.5%). In cases of the second type, endometrial cancer can be focal.

In case 1, TVS revealed an atrophic uterus and a very thin endometrium (2 mm), and histopathologic examination disclosed a poorly differentiated adenocarcinoma which was both progesterone and estrogen receptor negative. We believe that this case was of the second type. These findings suggest that TVS may be of limited usefulness in screening for the second type of endometrial carcinoma.

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