# Waveforms for Endometrial Ablation Compared

*When using the rollerball, cutting and coagulation are equally effective, a first-ever study concludes.*

BY DOUG BRUNK
*San Diego Bureau*

LAS VEGAS — Cutting and coagulation waveforms are equally effective for hysteroscopic endometrial ablation using the rollerball, results from the first clinical study of its kind demonstrated.

An in vitro study from the early 1990s showed that the depth of thermal injury to 3 mm of myometrium (the depth of destruction believed to completely destroy the basal layer) was found to be more consistent with use of the low-voltage cut waveform compared with the high-voltage modulated coag waveform (Obstet. Gynecol. 1993;82: 912-8). However, no published clinical trial has compared the two radiofrequency waveforms after rollerball endometrial ablation, Dr. Paul T. Chang said at the annual meeting of the AAGL.

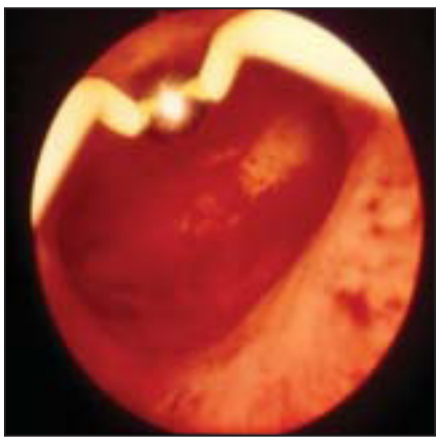
**The low-voltage cut waveform is more likely to result in deep and homogenous tissue penetration.**

DR. CHANG

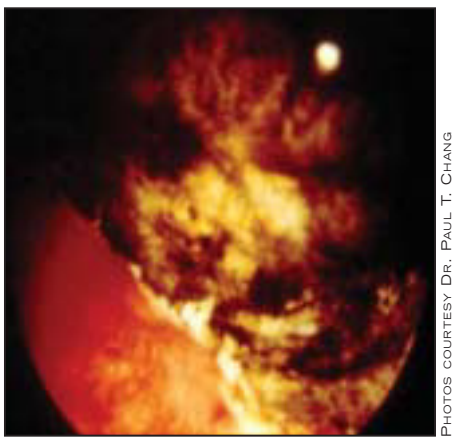
The low-voltage cut waveform, which heats the tissue more slowly, "is more likely to result in deep and homogenous tissue penetration, while the high-voltage modulated coag waveform is more likely to result in superficial tissue desiccation and subsequent increase in tissue impedance," said Dr. Chang, a specialist in minimally invasive gynecology and infertility at the Toronto Centre for Advanced Reproductive Technology.

In a trial intended to serve as a pilot study for a larger randomized trial, Dr. Chang and his mentor, Dr. George A. Vilos of the University of Western Ontario, London, allocated 47 premenopausal women to hysteroscopic electrocoagulation of the endometrium using a 5-mm diameter rollerball with cut or coag waveforms at 100 watts of power. Eligibility criteria included symptomatic menorrhagia, no desire for future pregnancy, no intramural or submucosal myomas 3 cm or larger, no active pelvic inflammatory disease, and no atypical endometrial hyperplasia or cancer. The average age of the patients was 41 years and the average body mass index was 28 kg/m$^2$.

Of the 55 women 22 were in the cut waveform group and 23 were in the coag waveform group. One physician experienced in hysteroscopic surgery and two surgical fellows performed all procedures at St. Joseph's Health Care in London, Ont., between November 2004 and March 2005.



**Hysteroscopic view of uterine cavity: Rollerball electrode is at upper left.**



**Brown tissue is area of thermal damage from ablation with a coag waveform.**

PHOTOS COURTESY DR. PAUL T. CHANG

Primary outcomes included rates of menstrual reduction, need for reintervention, patient satisfaction as measured by questionnaires, and complications. Two-year follow-up was completed by either questionnaires or telephone contact.

Dr. Chang and his associates hypothesized that patients in the cut waveform would have superior clinical outcomes compared with those in the coag waveform group. However, at 2 years of follow-up, the rate of hypomenorrhea was 52% in the coag group and 32% in the cut group, a difference that was not statistically significant.

There were no statistically significant differences between the coag and cut waveform groups in terms of amenorrhea rates (28% vs. 36%, respectively); reintervention rates (32% vs. 36%), and the percentage of women who reported being either satisfied or very satisfied with the results (68% vs. 64%). No complications occurred in either group.

Dr. Chang pointed out that the trend toward higher amenorrhea rates in the cut waveform group "supports in vitro findings. One significant observation was that the rollerball electrode was rapidly covered with coagulated tissue when using the cut waveform," he added. "This required the scope to be withdrawn and the rollerball to be cleaned several times during the procedure." Based on this analysis, he and his associates concluded that both waveform types are safe and equally effective for hysteroscopic endometrial ablation using the rollerball.

Dr. Chang stated that he had no conflicts of interest to disclose. ■

# Tips for Diagnosis, Treatment of Vulvar Lichen Sclerosis

BY ROBERT FINN
*San Francisco Bureau*

SAN FRANCISCO — If left untreated, lichen sclerosis can lead to scarring, destruction of normal vulvar architecture, and even skin cancer, but if caught early and treated properly, complete remission is possible.

"It's a wonderful disease to treat," said Dr. Erika Klemperer, a dermatologist in private practice in Santa Barbara, Calif. "You can make these patients better."

The first step is recognizing when the diagnosis is lichen sclerosis and when it is something else, she said at a meeting sponsored by Skin Disease Education Foundation (SDEF).

Patients will complain of pruritus, but they will avoid scratching because it is too painful. In contrast, vulvar lichen simplex chronicus results in an itch that is pleasurable to scratch.

They also will report dyspareunia, dysuria, and painful bowel movements. And patients will either be prepubertal or postmenopausal, she said.

"You've got to thoroughly look at the vulva to pick up the early signs of disease," Dr. Klemperer said. "You have to be comfortable looking in this area so we can help these women. You've got to make sure you spread the lips. And not just pulling the labia apart. You really have to manipulate the folds, lift up the clitoral hood."

If it is lichen sclerosis, pallor and edema can be seen, in addition to well-demarcated pearly white plaques that tend to be symmetric and arranged in a figure eight around the vulva, perineum, and perianal regions. The plaques will have a distinctive texture—either a dull, glazed, waxy texture; a very shiny texture; or a fine, crinkled texture.

Purpura, fissures, and fragility also are common. "Purpura is a key diagnostic sign," Dr. Klemperer said. "If you see purpura, think lichen sclerosis."

Edema around the clitoral hood is another early finding, and in more advanced cases there may be secondary lichenification and extensive scarring.

If unsure whether it is vulvar lichen sclerosis, look elsewhere on the patient's body. About 10%-15% of women with the condition will have extragenital disease, most often on the upper trunk. Lesions in that location can confirm an uncertain diagnosis, she said.

In addition to treating the secondary infections, "Ultrapotent topical steroid ointments are absolutely the treatment of choice for lichen sclerosis," Dr. Klemperer said. "They've been proven not only to improve symptoms but also to actually affect both clinical and histologic disease. You can reverse all the changes that we talked about except for the scarring." (See sidebar.)

Although treatment needs to be individualized, Dr. Klemperer tends to start with twice-daily treatment for the first month and once or twice daily thereafter. She said that she typically will treat for 12 weeks, but this can vary.

Relapses are common when treatment is stopped, so Dr. Klemperer now recommends maintenance treatment. "The studies have not been done yet to show what that ideal [maintenance] treatment is, but most of us in the vulvar derm world do 1-3 nights weekly of mild to potent topical steroid ointments," she said. "And then I see them back in 3 months to see how they're doing." Educating the patient on the need for these treatments also is critical. "I tell them why we're doing this," Dr. Klemperer said. "We're trying to prevent further scarring. Lichen sclerosis definitely has an association with squamous cell carcinoma. My goal is to prevent that."

Dr. Klemperer stated that she had no conflicts of interest related to her presentation. SDEF and this news organization are wholly owned subsidiaries of Elsevier. ■

## Appropriate Use of Ultrapotents Is Key

Ultrapotent topical steroids can be used safely and effectively in the vulvar area, but appropriate use is key, Dr. Klemperer said.

She offered the following topical steroid safety tips:

- ► Ultrapotents should not be used for psoriasis or a mild contact dermatitis. Desonide ointment or other lower-potency topicals will do the trick.
- ► Use ointments rather than creams because they are more occlusive.
- ► Monitor patients monthly for side effects. Although mucous membranes are relatively resistant to steroid side effects, this is not true of skin in the groin or perineum, or around the buttocks.
- ► Stress to patients that ultrapotent steroids should be used once or twice daily, never more.
- ► Monitor the quantity that patients use. "They should not be going through a 30-g tube in less than 3 months. If they are, they're putting on much too much."
- ► Perform a biopsy on a persistent hyperkeratotic, ulcerated, or nonresponsive area.