100%) but a higher sensitivity in the high probability group (91%) than in the low and moderate probability groups (61% and 67%, respectively).

Recommendations for clinical practice. **Primary care physicians can use clinical data for estimating the probability of DVT in a nonhospitalized patient. Clinical data should affect how we use the result of venous sonography, especially when the test result does not concur with our clinical impressions. Based on these data, we can conclude that one third of low-probability patients with positive sonograms will not have DVT. While a negative sonogram rules out DVT in this group, a positive sonogram in this group should be followed up by venography to confirm the diagnosis. In contrast, one third of high-probability patients with negative sonograms will actually have DVT. While a positive sonogram is diagnostic of DVT in the high-probability group, a negative sonogram in a high-probability patient should be followed by a venogram. In patients with moderate clinical probability of DVT, both positive and negative sonograms are fairly diagnostic and can be used as the basis for treatment decisions.**

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ELECTROSURGICAL LOOP EXCISION OF THE CERVICAL TRANSFORMATION ZONE

TITLE: Electrosurgical loop excision of the cervical transformation zone: the experience of family physicians
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Clinical question. **Should family physicians perform electrosurgical loop excision of the cervical transformation zone?**

Background. Cervical dysplasia is a common problem that has been treated by a variety of methods over the years, including cone biopsy, cryotherapy, laser ablation, and, more recently, electrosurgical loop excision of the transformation zone (ELECTZ), also referred to as "loop electrosurgical excision procedure" (LEEP). The procedure is generally performed in the outpatient setting under local anesthesia. A loop electrode is used to excise abnormal tissue, and, in the case of ELECTZ, the entire cervical transformation zone. The entire specimen can then be submitted for pathologic analysis. Possible advantages of this procedure include the ability to detect occult invasive cancer, and the potential to decrease the number of visits required for diagnosis and treatment.

Population studied. Study subjects were recruited from women scheduled for ELECTZ in the practices of six family physicians at five practice sites. All physicians in the study were experienced colposcopists. Four practice sites were located at medical schools; the fifth private practice site is associated with the National Procedure Institute. A total of 198 women were recruited for the study; the mean age was 25.5 years (range 15 to 65); 37% were nulliparous, 40% were current smokers, and 15% had been previously treated for cervical dysplasia, primarily by means of cryotherapy. No information is provided about either ethnicity or socioeconomic status or about patients not participating in the study because of exclusion criteria or refusal.

Study design and validity. The study is a descriptive report of a large case series, focusing on short-term outcomes and complications for ELECTZ and ELECTZ conization procedures performed by family physicians. Women were considered eligible for inclusion in the study and performance of the procedure if they had any evidence of cervical dysplasia, which could include cytologic or colposcopic findings. Histologic confirmation of dysplasia was not required before performing the procedure. This approach contradicts recent interim guidelines for management of abnormal Papanicolaou smears released by a committee of the National Cancer Institute.[1] The possible effects of loss to follow-up on the reported results were not considered in the analysis. Major limitations to the study design include the following: (1) no conclusions can be drawn about appropriate indications for this procedure as it was not directly compared with other forms of treatment for cervical dysplasia, and (2) the location of practice and degree of expertise of the participating physicians make it difficult to generalize the results of this study to usual practice for community-based family physicians.

Outcomes measured. Histologic results of the ELECTZ procedures were compared with previous cervical biopsy specimens, when these were performed. The frequency of

short-term complications and persisting cervical dysplasia on follow-up examinations is described.

Results. Initial cytology results, available for 192 women, showed low-grade or lesser abnormalities in 137, high-grade abnormalities in 47, and normal results in 7. Histologic results were low grade or less in 46 women, high grade in 102, and normal in 2. One hundred thirty-four women had histologic results from both cervical biopsy and ELECTZ. In 22 cases (16%), ELECTZ histology was negative; 52 (39%) are described as low grade (including human papillomavirus (HPV) changes and cervical intraepithelial neoplasm I (CIN 1); 58 (34%) are described as high grade (CIN 2, CIN 3, or carcinoma in situ [CIS]). One microinvasive and one invasive case of cervical cancer were diagnosed. Both cases of cervical cancer were reported as high grade on the initial cervical biopsy specimens: one with gland cleft involvement, and the other with a positive endocervical curettage. In 10 cases (7%), biopsy results from initial colposcopy were negative or low grade, while ELECTZ histologic results revealed a high-grade lesion. Eight women who had ELECTZ had negative initial cervical biopsy results; 3 of these were reported to have high-grade lesions in the ELECTZ specimen. The rationale for performing ELECTZ in this group of women is not described.

Complications of the procedures included bleeding more than 25 mL in 6.8%, with one major hemorrhage of approximately 1500 mL, requiring suturing and hospitalization. Injury from the electrode to the vaginal sidewalls occurred in 3.5% of cases. In 83% of cases, there were no complications. The cure rate for subjects for whom follow-up data were available was approximately 90% (n=132). Treatment failures were related to the extent of the lesion; lesions involving three or four quadrants had a treatment failure rate of 17%.

Recommendations for clinical practice. **The question "Should family physicians perform electrosurgical loop excision of the cervical transformation zone?" requires answers to two related questions: (1) Are family physicians capable of performing ELECTZ and ELECTZ conization with no greater rate of complications than are other specialists who perform the procedure? and (2) Are there sufficient indications for the procedure to justify training a large number of practitioners to perform it?**

To the first question, this study gives a qualified yes: well-trained family physicians practicing in university settings can perform ELECTZ and ELECTZ conization with complication rates comparable to those of obstetrician/gynecologists in previously published series. The second question has not yet been answered. Cure rates of ELECTZ in this study are comparable to those of cryotherapy in previously published series,[2,3] and serious complications are likely to be more frequent. Low-grade squamous intraepithelial lesions may regress spontaneously as often as 50% of the time, and in reliable patients, close observation may reduce the need for any treatment.[1] To determine whether ELECTZ or ELECTZ conization will improve outcomes or result in fewer complications, a randomized trial comparing it with alternative therapeutic approaches will be needed. In the meantime, it is clear that training a large number of physicians to perform particular procedures will tend to increase the number of those procedures performed.[4] Although family physicians can clearly be trained to provide ELECTZ to their patients, it is important to remember that ELECTZ is not a risk-free procedure, as evidenced by the one case of major hemorrhage requiring hospitalization described in this series. Prudence would dictate caution in promoting the widespread use of ELECTZ as treatment for cervical dysplasia until research better defines appropriate indications for its use. ***Primum no nocere.***

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