Commentary (Duska): Fertility-Preserving Options for Cervical Cancer

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Childbearing is one of the most important life goals for many women, and fertility preservation is a very important factor in the overall quality of life of cancer survivors. Cervical cancer frequently affects young women; because some women tend to delay childbearing, fertility preservation must be considered when treatment options are discussed. Over the past decade, the radical trachelectomy procedure has become a well established fertility-preserving option for young women with early-stage cancer; this procedure is associated with low morbidity, good oncologic outcome, and a high proportion of pregnancies that reach the third trimester and babies that are delivered at term. This article will review available literature on the vaginal radical trachelectomy procedure and data from other surgical approaches, such as the abdominal radical trachelectomy. In addition, the potential future application of neoadjuvant chemotherapy followed by fertility-preserving surgery in patients with locally advanced cervical cancer will be examined. Finally, ultraconservative surgical approaches (eg, conization alone with or without laparoscopic lymphadenectomy) in very early-stage disease will be discussed.

When the radical trachelectomy procedure was first presented by Dargent at the 1994 meeting of the Society of Gynecologic Oncologists,[1] it was considered innovative and experimental. Medical professionals worried that conservative surgery would be less successful than radical hysterectomy in controlling cancer. By 2006, data reported largely by Dargent and Plante and summarized in the current article have suggested that, for appropriately selected patients, the risk of cancer recurrence associated with fertility-preserving surgery is similar to that of the traditional surgical approach.

Complex Questions
When, then, does it become the "standard of care" to offer the option of this conservative procedure to women of reproductive age who are diagnosed with cervical cancer of limited extent? What volume of reported cases is required before gynecologic oncologists accept radical trachelectomy as a standard therapeutic option for appropriately selected patients with stage IB cervical cancer? These questions are complex and multifactorial. The cancer control question is apparently not a major concern, assuming that patients are chosen carefully using criteria that have become increasingly refined. The optimal selection criteria, however, remain elusive. What methods should be employed to choose good candidates for this procedure? What potential complications need to be considered?

As the authors of the current review note, infertility and preterm delivery are two significant problems encountered after radical trachelectomy. How are these difficulties best addressed? Are there other options that we should be discussing with our patients?

Patient Selection
Data presented by the authors demonstrate that young women with lesions smaller than 2 cm who have no lymphovascular invasion are appropriate candidates for radical trachelectomy. It is essential to exclude disease beyond the cervix, and if we accept radical trachelectomy as a standard option, we are obliged to define a standard clinical and imaging evaluation designed to identify appropriate candidates.

Magnetic resonance imaging, a diagnostic tool mentioned by the authors, is probably the best currently available modality to identify parametrial spread and extension into the upper endocervix and myometrium—two findings that would render radical trachelectomy inappropriate. In addition, positron-emission tomography/computed tomography can be helpful in identifying spread to retroperitoneal lymph nodes, particularly in squamous lesions, and should be considered preoperatively for patients contemplating radical trachelectomy.[2]

As concerns about cancer recurrence subside, infertility and obstetric complications emerge as significant problems. Infertility rates after an abdominal approach seem similar to those found after a
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vaginal approach, but the data are limited.[3] In our own experience, infertility secondary to cervical factors has been a problem (unpublished data). Obstetric complications, particularly preterm delivery, should be addressed preoperatively. A multidisciplinary approach, including input from a perinatologist and an infertility expert, may help in counseling a patient regarding this fertility-preserving surgery. If available, high-risk obstetric consultation gives the patient a better understanding of the risk of premature delivery and the outcomes of premature infants. Preoperative infertility consultation allows the patient and her partner to consider intrauterine insemination and in vitro fertilization as possibilities. The more education that the patient receives, the more informed a decision will be made. Finally, we should not offer a procedure just because we can do it technically—we should perform the right procedure for the right patient. Patients should be counseled about other options for maintaining the ability to bear children besides radical trachelectomy. In the current era of assisted reproductive technology, options are available for women who undergo hysterectomy for any reason to have their own genetic offspring. For some patients, ovarian hyperstimulation with oocyte retrieval and embryo cryopreservation preoperatively (or postoperatively, if ovaries are conserved) with subsequent use of a gestational surrogate may be a sensible alternative. In the future, ovarian and oocyte freezing may be options for women without partners. For women who wish to become parents but for whom a genetic relationship is not as important, adoption is an additional option. All of these alternatives allow women to avoid the potential complications associated with radical trachelectomy and subsequent pregnancy.

Conclusions
Radical trachelectomy should be offered to all young women who wish to preserve their fertility and who are deemed appropriate candidates for the surgery. From a quality-of-life standpoint, gynecologic oncologists must discuss the issue of fertility with their patients and present this type of surgery as an option. Since the surgery can be performed transabdominally in a fashion similar to radical hysterectomy, American gynecologic oncologists should enjoy a rapid learning curve for this technique. Indeed, the growing volume of literature regarding radical trachelectomy suggests that this surgery should no longer be considered experimental. It should be considered part of the gynecologic oncologist's standard armamentarium in treating women of reproductive age who are diagnosed with early cervical cancer. The use of neoadjuvant chemotherapy to render a patient with a larger lesion a suitable candidate for radical trachelectomy is an exciting and imaginative approach, but data on this method are preliminary and the technique remains experimental. That said, curing the cancer must remain our first goal. To consider less is unacceptable.

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Disclosures:
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