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


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.

This article by Plante and Roy represents a comprehensive summary of the fertility-preserving options for cervical cancer patients. Despite a decline in the number of cervical cancer diagnoses in developed countries, the authors illustrate a problem that is becoming more common in these very same societies. As women continue to delay childbearing, more women who have yet to complete their families will be diagnosed with cervical cancer—and will face the loss of fertility associated with their cancer treatment.

Recently, issues of cancer survivorship have garnered much attention. Quality of life has become a major focus of cancer care, and surgeons gradually have moved away from the radical en bloc resections once thought necessary for cancer cure. Their discoveries have shown that organ function may be preserved as comparable oncologic outcomes are maintained.

Plante and Roy demonstrated how these principles have been applied to the surgical management of cervical cancer. Although much of the article highlights the available data for vaginal radical trachelectomy, it also addresses other surgical alternatives to trachelectomy that are beginning to appear in the literature.

Vaginal Radical Trachelectomy

The concept of a conservative surgical approach to managing cervical cancer was initially proposed by Aburel, a Romanian gynecologist who described an operation called the "subfundic radical hysterectomy" that was performed through an open incision.[1] Interest in this procedure was quickly lost when patients had no success in becoming pregnant.

Dargent, the late French surgeon, may be credited with reviving this fertility-preserving concept. Dargent was the driving force behind the procedure he initially called the "radical trachelectomy."[2] In 1987, he first performed the procedure using a vaginal approach; later, he coined the procedure "vaginal radical trachelectomy." Although the procedure was initially met with skepticism, Dargent remained committed to developing this technique to treat early cervical cancer patients without sacrificing their fertility. As more data about the procedure began to accumulate, the oncologic community began to recognize this method as a reasonable option for patients desiring fertility preservation.[3]

To whom should this procedure be offered? Unfortunately, fertility preservation cannot be offered to everyone. Selection of the appropriate patient for organ-preserving surgery is imperative, since oncologic outcomes must not be compromised. Specific institutional criteria may vary, but, in general, patients should have tumors smaller than 2.0 to 2.5 cm. By employing such a cutoff, recurrence rates for patients undergoing radical vaginal trachelectomy may be kept in a range.
comparable to that of radical hysterectomy.[4] Such a limited radical surgery may not be appropriate as tumor size increases. Dargent demonstrated that the risk of recurrence is 19% for tumors larger than 2 cm and 25% for tumors of that size that have invaded deeper than 1 cm.[5] Thus, many specialists do not advocate the procedure for these larger lesions.

The benefits of the vaginal radical trachelectomy are obvious. Well over 100 babies have been born to cervical cancer patients who otherwise might have been left infertile after treatment. Although these pregnancies have a high-risk nature, most of them will be carried to term. The authors have summarized issues regarding the follow-up and obstetric management of these trachelectomy patients. Consultation with perinatal specialists should be strongly considered in such cases.

Alternative Surgical Approaches
A growing body of literature suggests that radical trachelectomy is a reasonable alternative to radical hysterectomy; however, most of these data have been specific to vaginal radical trachelectomy, which is a technically demanding operation that requires laparoscopic and vaginal surgery skills. In societies where surgeons are more accustomed to operating via an abdominal approach, the enthusiasm for this procedure has not been as widespread, and alternative surgical approaches have been developed. The authors provide a nice summary of the available data related to these other techniques.

The abdominal radical trachelectomy may be more attractive to many. Conceptually, it is similar to the abdominal radical hysterectomy; thus, the learning curve is significantly shortened for surgeons practiced in this technique. The uterine arteries are sacrificed during the abdominal radical hysterectomy, but this sacrifice may allow for a more radical parametrial excision. Pregnancies have been reported in women who have undergone the procedure, which has been associated with greater blood loss and longer hospital stays. Overall, this approach may apply specifically to patients who desire fertility preservation but have lesions that exceed the 2.0- to 2.5-cm limit of vaginal radical trachelectomy. More data are needed before such an assumption can be made.

The other reported approaches to the radical trachelectomy rely heavily on advanced laparoscopic skills. Oncologic and fertility data are lacking for these techniques, but they may eventually become the chosen route for surgeons already performing total laparoscopic radical hysterectomy. In their Table 3, the authors offer a summary of the level of skills required for each surgical approach. Neoadjuvant chemotherapy followed by fertility-preserving surgery and ultraconservative surgical approaches with combined conization and node evaluation are both relatively new concepts. More long-term follow-up is needed to determine if these are acceptable options; but these techniques may eventually provide more patients with fertility-preserving options.

Conclusions
Nearly 20 years ago, Dargent developed an operation that offered cervical cancer patients an opportunity for fertility preservation. Plante and Roy have provided an excellent review of this procedure and the data that support it as a reasonable option for suitable candidates. Unfortunately, Dargent's operation requires that the surgeon be a "vaginalist," which may limit its availability. The encouraging results of vaginal radical trachelectomy have led others to incorporate the same principles as they use more familiar approaches. In time, as data accumulate and more surgeons become familiar with the aforementioned procedures, the concept of fertility preservation should be discussed more widely during preoperative consultations of young women with cervical cancer.

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Disclosures:
The author has no significant financial interest or other relationship with the manufacturers of any products or providers of any service mentioned in this article.

References:


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