PREGNANCY RATES AFTER RADICAL TRACHELECTOMY FOR EARLY CERVICAL CANCER

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Introduction

- Cervical cancer is the fourth most common cancer in women worldwide, and is often first detected in women of child-bearing age (1)
- As the average child-bearing age increases, the number of women with cervical cancer who wish to conceive, and therefore the need for fertility-sparing treatment for cervical cancer has also increased (2)
- Prior to 1994, radical hysterectomy was the primary treatment option for cervical cancer, which did not allow for fertility-sparing options
- Radical trachelectomy is an alternative option for women with cervical squamous carcinoma or adenocarcinoma, of Stage IA1 with lymphovascular space invasion, IA2 or IB1, lesion size ≤2cm with limited endocervical extension and no evidence of lymph node metastasis on initial staging; who are of reproductive age and still wish to conceive (3)
- For early-stage cervical cancer, radical trachelectomy has equivalent oncologic outcomes to radical hysterectomy (4)

Aims & Objectives

This study aims to report pregnancy rates and obstetric outcomes for a series of patients treated with radical trachelectomy at the Department of Obstetrics & Gynaecology, Medical University of Vienna, Austria, over the last 10 years.

Methods

- All consecutive patients with early stage cervical cancer and the desire to preserve fertility, who were treated with radical trachelectomy between 2007 and 2017 at a single academic institution were included.
- Women at reproductive age, diagnosed with early stage cervical cancer and the wish to preserve fertility were discussed at an interdisciplinary tumour board for consideration for fertility preserving therapy.
- At this institution, all patients had a lymphadenectomy followed by radical trachelectomy through an open, abdominal approach.
- Clinico-pathological data were derived from retrospective chart review.

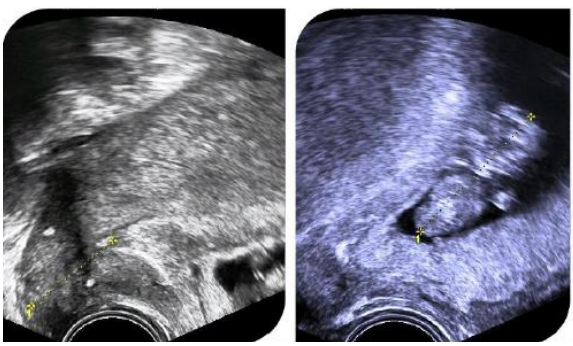

Figure 1: Successful pregnancy after radical abdominal trachelectomy. A cerclage was placed at time of trachelectomy

Criteria for radical trachelectomy

Node negative disease

- Initial pelvic lymphadenectomy is recommended. Nodal spread should be treated with primary chemo-radiation. In node-positive disease, fertility cannot be preserved

Tumour size

- MRI is the best modality to evaluate tumour size and distance from the tumour to the internal os of the cervix. Tumors ≤FIGO IB1, ideally tumours smaller than 2cm are feasible for fertility- sparing surgery

Histological type

- Squamous and adenocarcinomas are acceptable for fertility-sparing surgery
- Even for very small tumours of aggressive histological type (e.g. neuro-endocrine tumour), trachelectomy is not recommended

Results

Patient & Tumour characteristics

- Mean age at first diagnosis was 31.6 (range 25 to 37) years.
- 90% of disease was diagnosed at FIGO stage 1B1 (n=18); 2 patients at FIGO stage 1B2.
- 75% of cases were squamous cell carcinomas & 25% were adenocarcinoma.
- All patients underwent evaluation of pelvic lymph nodes prior to radical trachelectomy – an average of 24 nodes (range 5-51) were resected.
- Radical trachelectomy was attempted for 20 patients, and was successful in 14 patients (4 cases required radical hysterectomy due to positive endocervical resection margins, and 2 cases required primary radiotherapy due to positive lymph nodes).

Oncologic Outcomes

- Median follow up time was 26.7 months.
- One patient had a local recurrence of disease after 114 months.
- Zero patients died.

Obstetric Outcomes

- Of the 14 patients who had successful radical trachelectomy, only 4 (29%) attempted to conceive.
- One of these 4 patients had a successful pregnancy with IVF, with cerclage placed at time of radical trachelectomy (Image 1) and Caesarean delivery.
- Reported reasons for not attempting pregnancy included
    - Recurrence of cervical cancer
    - Fear of cancer recurrence
    - No partner
    - Fear of premature birth

Conclusions

- There are two major goals of fertility-sparing surgery in early stage cervical cancer, 1) Live births and 2) Oncologic safety
- Comparable to the existing literature, this case series had favourable obstetric outcomes in this population (25%), after IVF
- However, of 14 successfully operated young women, only four attempted to conceive, due to fear of recurrence or premature birth, or not having a partner
- This indicates a need for extensive pre-therapeutic patient education and a preference for these patients to be seen by gynaecological oncology and reproductive medicine specialist

References

(1) National Cancer Institute. Cancer of the Cervix Uteri: SEER Incidence and U.S. Death Rates, Age-Adjusted and Age-Specific Rates, by Race: National Institutes of Health; 2010 [cited 2018 January 3]. Available from: https://seer.cancer.gov/archive/csr/1975_2010/browse_csr.php?sectionSEL=5&pageSEL=sect_05_table.07.html
(2) Siegel RL, Miller KD, Jemal A. Cancer statistics, 2016. CA: a cancer journal for clinicians. 2016;66(1):7-30.
(3) Marchiole P, Benchaib M, Buenerd A, Lazlo E, Dargent D, Mathevet P. Oncological safety of laparoscopic-assisted vaginal radical trachelectomy (LARVT or Dargent's operation): a comparative study with laparoscopic-assisted vaginal radical hysterectomy (LARVH). Gynecologic oncology. 2007;106(1):132-41.
(4) Xu L, Sun FQ, Wang ZH. Radical trachelectomy versus radical hysterectomy for the treatment of early cervical cancer: a systematic review. Acta obstetricia et gynecologica Scandinavica. 2011;90(11):1200-9.