

Radical abdominal trachelectomy and pelvic lymphadenectomy in a nulliparous patient with cervical adenocarcinoma: A case report

Elpis Galati, Victoria Psomiadou, Fotios Lefkopoulou, Athanasios Douligeris, Anastasia Prodromidou, Evgenia Karavioti, Christos Iavazzo*, Alexandros Rodolakis, George Vorgias

Department of Gynaecological Oncology, Metaxa Memorial Cancer Hospital, Piraeus, Greece

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ABSTRACT

Cancer of the cervix is the fourth most common malignancy among women in the world and the sixth most common among women in Europe. Almost half of patients with an early-stage invasive cervical carcinoma are under 40 years of age, while the average age at first pregnancy in European countries is over 28 years. Therefore many women with cervical cancer have not started or completed their family at the time of diagnosis and ask for fertility-sparing surgery. Radical trachelectomy is a safe alternative to standard care (radical hysterectomy) for patients diagnosed with early-stage cervical cancer and is a reasonable choice in well selected cases. We present the case of a 23-year-old patient diagnosed with a cervical adenocarcinoma and treated with abdominal trachelectomy.

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1. Introduction

Cancer of the cervix is considered to be the fourth most common malignancy among women in the world and the sixth most common among women in Europe [1]. Almost half of patients with an early-stage invasive cervical carcinoma are under 40 years of age, and 25% of patients are aged 25–29 years. The average age at first pregnancy in European countries is over 28 years. Therefore, many women with cervical cancer have not started or completed their family at the time of diagnosis and ask for fertility-sparing surgery.

Radical trachelectomy is a safe alternative to standard care (radical hysterectomy) for patients diagnosed with early-stage cervical cancer and is a reasonable choice in well selected cases [2]. The selection criteria include: the desire to preserve fertility; no signs of infertility prior to surgery; a diagnosis of squamous cell carcinoma or adenocarcinoma of the cervix; tumour size up to 2 cm; FIGO stage IA1 with lympho-vascular space invasion, stage IA2 or IB1; tumour confined to the cervix as proved by preoperative imaging; cranial extent of the tumour at least 1 cm away from the internal os; and no pelvic node metastases [3].

2. Case Report

A 23-year-old nulligravida woman was admitted in the gynaecological oncology department reporting post-coital bleeding. The gynaecological examination revealed stage IB1 cervical cancer. After dilation and curettage, the pathology report described well differentiated adenocarcinoma of the endocervix. Magnetic resonance imaging of the abdomen revealed a cervical mass 2X2cm located at the posterior wall of the ectocervix, with a cranial extent of 11,5 mm. The tumour was located 21 mm lower than the internal cervical os. There were no signs of metastases at the parametrium or the pelvic lymph nodes, the para-aortic lymph nodes, the upper abdomen and thorax.

The patient expressed the wish to preserve fertility. She underwent pelvic lymphadenectomy, and 16 lymph nodes were removed. These were reported to be metastasis-free after frozen-section examination. A radical abdominal trachelectomy was performed. A clear resection margin was obtained, as confirmed by frozen-section analysis of the endocervical tissue surrounding the tumour (Fig. 1). The internal cervical os was sutured with an Ethibond suture (Fig. 2). Histological examination described a moderately differentiated adenocarcinoma of the endocervix. The tumour was located 7 mm away from the surgical margin of the endocervix and 10 mm away from the surgical margin of the vagina.

There were no problems post-operatively and normal menstruation occurred 6 weeks after surgery. One year after close follow-up, the patient was in good health.

* Corresponding author at: Nosokomeio Metaxa, Gynaecological Oncology, 51, Botassi Str., Piraeus, GR 18537, Greece.

E-mail address: christosiavazzo@hotmail.com (C. Iavazzo).



Fig. 1. The cervix and parametrium are separated from the fundus.

3. Discussion

Radical vaginal trachelectomy with laparoscopic bilateral pelvic lymphadenectomy was first proposed by Daniel Dargent in 1994 [4]. Smith in 2005 applied an abdominal approach [5]. The approach is chosen by the surgeon, and depends on characteristics of the patient and the tumour and the skills of the surgeon.

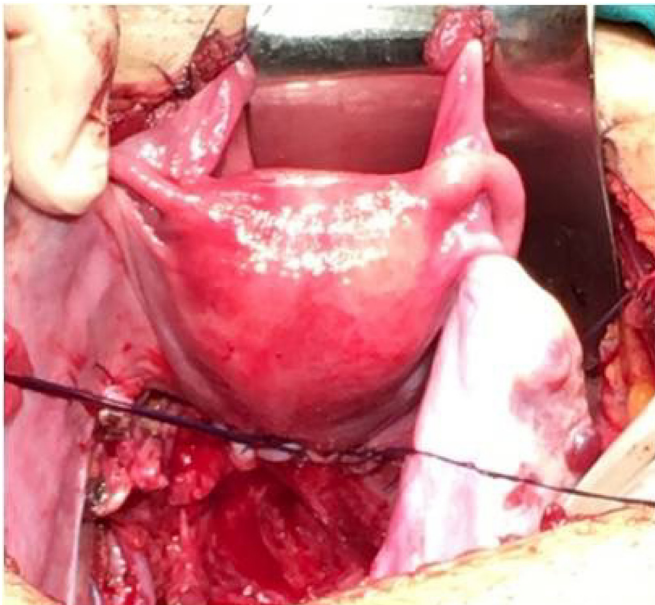


Fig. 2. A permanent cerclage is placed on the uterus.

The most common complications after a radical trachelectomy are cervical stenosis (3–6%), ureteral injury (3%), bladder muscle injury (2%) and pregnancy complications due to cervical incompetence [6].

The risk of cancer recurrence after radical trachelectomy is 4–5%, while the 5-year recurrence-free survival rate is 95–96%. The 5-year survival rates for patients with stage IA2 and IB1 cervical cancer after radical hysterectomy are 95% and 90%, respectively. In this respect there is no significant difference between radical trachelectomy and radical hysterectomy. [7]

Abdominal trachelectomy is found to have more favourable oncological outcomes and a lower risk of complications (<1%) than vaginal trachelectomy (>5%). It is the surgery of choice in cases of exophytic cervical lesions, cervical cancer in the two first trimesters of pregnancy and tumours >2 cm [8].

Risk factors for recurrence are lesions >2 cm, depth of invasion >10 mm and lymphovascular space invasion. Sites of recurrence are the parametrium and the pelvic side walls (50% of tumours <2 cm), and pelvic or para-aortic lymph nodes (25%); less common sites are the corpus uteri and the vaginal fornix. Recurrence after a radical trachelectomy does not have a good prognosis. Recurrence can be treated by surgery, platinum-based chemotherapy or radiation [9].

Infertility is found in 25% of women who attempt to conceive after a fertility-sparing surgery. Pregnancy is often achieved without the need for assisted reproductive technologies. >300 pregnancies have been reported after a radical trachelectomy [10]; all the deliveries were via caesarean section. All such cases should be managed as high-risk pregnancies. Living babies are born in 65–68% of cases and half are delivered at term (37 weeks of gestation). Prematurity and premature rupture of membranes are the most important complications of pregnancy (27%).

4. Conclusion

After one-year follow-up the patient was in good health. She had not yet become pregnant.

Contributors

Elpis Galati contributed to manuscript writing.
Victoria Psomiadou contributed to manuscript writing.
Fotios Lefkopoulos contributed to manuscript writing.
Athanasios Douligieris contributed to manuscript writing.
Anastasia Prodromidou contributed to consultation.
Evgenia Karavioti contributed to consultation.
Christos Iavazzo contributed to protocol design.
Alexandros Rodolakis contributed to consultation.
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Patient Consent

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Provenance and Peer Review

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Conflict of Interest

The authors declare that they have no conflict of interest regarding the publication of this case report.

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