

# Abdominal radical trachelectomy - a real option for cervical cancer patients deserving to preserve their fertility. A case report

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## Abstract

Abdominal radical trachelectomy (ART) is one of the fertility-sparing procedures in women with early-stage cervical cancer. We describe as a case report a spontaneous pregnancy conceived after an abdominal radical trachelectomy performed in a young woman with a stage IB2 cervical cancer.

**Keywords:** pregnancy, cervical cancer, fertility-sparing procedure, abdominal radical trachelectomy

## Introduction

Invasive cervical cancer is one of the most common cancers, with 500,000 new cases diagnosed annually. Approximately 15% of all cervical cancers and 45% of surgically treated stage IB cervical cancers occur in women younger than 40 years<sup>(1)</sup>. The excellent prognosis of early-stage cervical cancer (the 5-year survival for patients with disease confined to the cervix is 80-93%), combined with the young age of many patients has led to a focus on maintaining both the survival prognosis and fertility after treatment. Many young women with decades of survivorship ahead of them consider preservation of fertility a priority and a key element to their quality of life<sup>(2)</sup>.

Abdominal radical trachelectomy (ART) is a fertility-sparing procedure described for the first time by the Romanian gynaecologist E. Aburel<sup>(3)</sup> in women with early-stage cervical cancer. The published results of ART in Romania, so far, are limited.

## Case report

The patient M.C.A., women aged 24, was admitted in our clinic on October 2011. Her diagnosis was: Cervical cancer stage IB2. On clinical examination, we found: a bleeding exophytic cervical tumour of 5x4 cm; normal uterine corpus, ovaries, parametria and rectum. Transvaginal ultrasound – cervical tumour of 52x48x41 mm, with in depth invasion of more than half of the cervix; normal ultrasound uterine corpus and ovaries. On her medical history - Babeş-Papanicolaou test - PapIV; H-SIL (Bethesda); punch biopsy - adenosquamous carcinoma, glassy cells subtype. Abdominal ultrasound describes the same cervical tumour; no extraperitoneal enlarged lymph nodes;

the rest of the abdominal structures seem normal. Thorax radiography - normal image. Lab examinations were in normal range, except a urinary infection with group beta streptococcus, for which she received antibiotic treatment.

After pre-anaesthetic evaluation and preoperative preparations, on 19.10., in general anaesthesia with oro-tracheal intubation and with L3-L4 epidural catheter, we performed an abdominal radical trachelectomy with pelvic lymphadenectomy, with ligation of both uterine arteries, with pararectal fossae drainage, without any intraoperative complications. We did not consider necessary to perform a cerclage, recommended only by some authors<sup>(4)</sup>. A special sentence regarding a careful peritonization at the end of the procedure, by our technique, described in another paper<sup>(5)</sup>. Intraoperatively, the frozen sections of five suspicious lymph nodes from the right side and two from the left side were negative. Also, the frozen section of the upper part of the removed cervix showed no tumour at that level. The whole procedure lasted 260 minute. The postoperative recovery was uneventful, with hospital discharge on the 8th day. The final pathology report: cervix of 35x32x39 mm with vagina of 25 mm; adenosquamous carcinoma glassy type, Broder grade 3, invading 10 of 16mm of the cervix wall; no metastases into the parametria (right 75x25x22 mm, left 50x31x12 mm) and in the 16 right and 26 left removed lymph nodes.

Follow-up consisted in clinical examination, Pap test, ultrasound and SCC marker every 3 months and a CT scan 6 months postoperatively, all normal. Her menstrual cycle was unchanged after the surgery.

Spontaneously she became pregnant, with her last period on 28.04.2012, confirmed by ultrasound at

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5-6 weeks of amenorrhea. The pregnancy evolved normally till 28 gestational weeks, with monthly clinical exam and ultrasound and Pap test every 3 months. As described by Ungar, we didn't performed a prophylactic cerclage during the pregnancy, because of the scary tissue resulted at the uterine isthmus, vaginal anastomosis. Starting with 28th gestational week, it has been discovered a slightly symmetrical intrauterine growth restriction, maybe normal, explained by a reduced uterine blood flow, delivered only by the two ovarian arteries after the surgical ligation of both uterine arteries. The pregnancy follow-up was even more careful, with a clinical examination, echography and Doppler velocimetry performed every 2 weeks and a 4-day hospital admission at 36 weeks for foetal monitoring. She delivered at 38-39 gestational weeks by elective caesarean section on 22.01.2013 a female newborn, 2550 grams, Apgar 9/1 minute. The procedure and the recovery were uneventful for both mother and newborn, with hospital discharge on the 5<sup>th</sup> day (Figure 1).

At this moment, 12 months after delivery, they both are fine, with normal follow-up.

## Discussion

The abdominal radical trachelectomy technique, imagined and described for the first time by the Romanian gynaecologist E. Aburel in 1956<sup>(3)</sup>, has been almost forgotten for 4 decades and „rediscovered” by Smith' and Ungar's team in the '90s<sup>(6)</sup>. Together with the vaginal radical trachelectomy with lapaoscopic pelvic lymphadenectomy described in 1997 by Dargent, it represents a real option for women with cervical cancer stages IA2-IB2 (IIA) who deserve to preserve their fertility. After analyzing a few hundred cases already published, the abdominal trachelectomy has a shorter learning curve, a higher oncologic radicality and a slightly better 5 years survival compared with the vaginal technique<sup>(7)</sup>. Another advantage consists on the feasibility to perform it for bulky cervical tumours - stages IB2 and IIA(8). Its main disadvantage is represented by a less favourable obstetrics outcome<sup>(7)</sup>.

In our series of 11 abdominal radical trachelectomies performed between May 2010 and July 2013, this is the first pregnancy obtained in 7 patients with normal



Figure 1. Abdominal radical trachelectomy specimen - inferior view

menstruation after the surgery. Between this 7, only 3 try to conceive at this moment. Four women are amenorrheic: one is postmenopausal now at age 40, one decided to receive adjuvant radiotherapy for 3 positive pelvic lymph nodes on final pathology report, and two have amenorrhea of uterine origin, probably because of lack of vascularization of the endometrium. For this reason, in the future, we'll try to preserve at least one of the uterine arteries, to provide a better blood supply to the uterus, but without compromising the oncologic radicality.

## Conclusions

We consider the abdominal radical trachelectomy as safe as the radical hysterectomy in oncologic terms. It must be offered to patients which early stages cervical cancer who deserve to spare their fertility. ■

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