

First childbirth after fertility sparing operation for cervical cancer 1B1 in: Case report

Branko Cvjetičanin,¹ Milan Čavić, Borut Kobal,¹ Tomaž Tomažević, Ana Ranc²

¹ Department of Gynaecology, Division of Gynaecology, University Medical Centre Ljubljana, Ljubljana, Slovenia

² Slovenj Gradec General Hospital, Slovenj Gradec, Slovenia

Korespondenca/ Correspondence:

Branko Cvjetičanin,
e: branko.cvjeticanin@
guest.arnes.si

Ključne besede:

vaginalna radikalna
trahelektomija;
laparoskopiska cerklaža

Key words:

vaginal radical
trachelectomy;
laparoscopic cerclage

Prispelo/Received: 11. 4.
2017 Sprejeto/Accepted: 22.
4. 2018

Abstract

Cervical cancer can affect women in their reproductive age. At stage IB1 fertility function can be preserved by radical trachelectomy and pelvic lymphadenectomy. This surgical procedure consists of the uterine cervix removal together with the surrounding paracervical tissue (parametria) and the pelvic lymph nodes, while the uterine corpus remains preserved. We present a case of a 32-year old nulipara with cervical cancer stage IB1. The patient, who was treated with radical fertility saving operation at the University Medical Centre Ljubljana, later became pregnant and gave term birth.

Cite as: Cvjetičanin B, Čavić M, Kobal B, Tomažević T, Ranc A. [First childbirth after fertility sparing operation for cervical cancer 1B1 in: Case report]. *Zdrav Vestn.* 2018;87(7–8):349–52.

DOI: 10.6016/ZdravVestn.2548

1 Introduction

Cervical cancer often affects young women; in almost one fourth of cases it is detected in women younger than 45 years, and frequently in women who have not given birth yet (1). In developed countries it is mostly detected in early stages in which the 5-year survival rate is over 90 % (2,3,4). As a rule, the treatment of early stage cervical cancer is surgical (stages IA, IB1 and IIA1) (2,3). Stage IB1 is treated by radical hysterectomy with pelvic lymphadenectomy (2,3). In younger women who are still in their fertile period the question of preservation of fertile function often arises (5) The decision on this type of treatment is indivi-

dual. Besides the patient wish to preserve her fertility, it is necessary to consider the risk of the disease relapse, and several factors such as the tumour size, histologic type, depth of invasion, lymphovascular space invasion, and the experience of the surgical team (5). The fertility sparing surgery is possible in early cervical cancer, FIGO stages IA1, IA2 and IB1, if the tumour size is less than 2 cm, and is squamous cell or glandular by histologic type (2,3,5). Fertility sparing is achieved by conisation and vaginal radical trachelectomy (VRT) with simultaneous lymphadenectomy (6). Neoadjuvant chemotherapy before surgery is given in some centres; its favourable effect is still being investigated (2,5).

VRT was first described by Daniel Dargent and co-workers in 1994. This was the beginning of a new era of surgeries preserving fertility in women with cervical cancer (7). Permitting a wider vaginal approach, VRT allows a partial or total removal of the uterine cervix, upper vagina and the parametrium, whereas the uterine corpus is preserved for potential subsequent conception. At the site of the internal os a new cervix is constructed. During surgery, a circumferential cerclage suture is placed at this site. Pelvic lymph nodes are removed before VRT is started, usually laparoscopically (8). This helps to find whether cancer has metastasised to the regional lymph nodes. Many studies comparing VRT vs. radical hysterectomy have found that in appropriately selected patients the survival and complication rates during and after surgery are comparable (9,10). In VRT, intraoperative complications occur in about 4 % of cases; the most frequent ones being injuries of the bladder or ureter and bleeding. Early postoperative complications occur in 12 % of cases (10), the most frequent being the disorder of the bladder tonus with urine retention, and infections (10,11). Late complications may include disorders of fluid flows in the lymphatic system, which cause lasting bloating of the affected body part, and stenosis of the newly constructed cervix along with painful and irregular menstruations (10,11).

About 30 % of women do not conceive spontaneously after VRT, mainly because of narrower internal os; in these women it is advisable to initiate fertility treatment (4,10). The overall pregnancy rate is 41–79 %.

Women who do conceive after VRT are at increased risk of spontaneous abortion and preterm labour, since the new cervix is shorter with thinner mucous layer which inflicts poorer tightening

and increased permeability for bacterial invasion. Between 70 and 75 % of pregnancies result in term delivery (9,10).

2 Case report

A 32-year old nullipara was referred to a tumour board in gynaecologic oncology after conisation and the diagnosed cervical squamous cell cancer with depth of invasion of 12 mm and width of 10 mm. She had had laboratory tests, abdominal ultrasound scan, urography, and chest X-ray done – the findings did not indicate the presence of metastases.

The pelvic examination carried out at the visit to the tumour board in gynaecologic oncology revealed necrosis after conisation. The patient wished to preserve her fertility. Histologic re-examination of the cone revealed the non-keratinising cervical squamous cell cancer, moderately differentiated (G2, stage IB₁). At the next presentation at the tumour board, the decision was taken that the patient should undergo laparoscopic pelvic lymphadenectomy and VRT with cerclage suture placement.

The patient was operated on the same month. In appearance, laparoscopically removed pelvic lymph nodes did not show pathologic changes. The entire cervix with the surrounding parametrium was removed through the vagina (VRT); rapid microscopic analysis (frozen section) during surgery did not show any malignant growth in it. A cerclage suture was placed through the vaginal route.

Early postoperative period was complication-free; the patient was under observation in the intensive care unit for three days, after which she was moved to the ward. She received analgesics, anti-clotting drugs, and an iron and vitamin B-complex preparation. Vaginal band and urinary catheter were removed on the first postoperative day; on day four

after surgery, she was discharged from hospital.

The definitive histologic finding did not reveal any remnants of malignancy (entire cancerous tissue was removed by conisation), therefore at the next visit the tumour board considered further treatment unnecessary.

The patient came regularly for pelvic examinations with the surgeon, the first one was done three months after surgery, and then after six months, which is in agreement with the guidelines of the management of cervical cancer in Slovenia (2). Eight months after VRT, the patient conceived, but had an abortion in the 20th week of pregnancy for spontaneous rupture of the membranes. The abortion was likely due to cervical incompetence. Consequently, a laparoscopic cerclage was suggested, which was done a year after VRT. The procedure consisted of a placement of a non-absorbable suture on the inner side of the uterine isthmus to prevent a possible spontaneous abortion and preterm labour. As the patient did not conceive spontaneously after the procedure, she underwent infertility treatment. She conceived after intracytoplasmic sperm injection (ICSI) 18 months after surgery. The pregnancy was uneventful. For high risk of preterm labour, she received dexamethasone for lung maturation at 30 weeks gestation. A healthy baby was born to the 36-year old

patient in the 39th week of pregnancy by elective caesarean delivery.

After delivery, the patient had regular pelvic examinations every six months which included medical history, physical examination, cervical cytology smear, colposcopy, and histology follow-up. After five years and six months of follow-up, the relapse of the disease was not found, therefore the follow-up was taken over by her personal gynaecologist, and was carried out yearly consisting of pelvic examination and smear taking. After almost nine years since the treatment, the patient has not suffered from relapse or late complications of treatment.

3 Conclusion

Cervical cancer is often detected in women who do not have children yet, but still want to get pregnant. Despite the oncologic challenge, the surgical treatment of this cancer permitting preservation of fertility is a successful and safe replacement of the classical radical treatment with hysterectomy under appropriate conditions. The presented patient was a suitable candidate for this type of surgery. Satisfaction at the birth of a term baby and the absence of disease reflect the holistic and quality approach to treatment.

The patient has consented to the publication of the article.

References

1. Rak v Sloveniji 2013. Ljubljana: Onkološki inštitut Ljubljana, Epidemiologija in register raka, Register raka Republike Slovenije, 2016.
2. Uršič Vrščaj M, Smrkolj Š, Petrič P, Primic Žakelj M, Bračko M, Stržinar M, et al. Smernice za obravnavo bolnic z rakom materničnega vratu v Sloveniji. Onkološki inštitut Ljubljana, 2012.
3. Koh WJ, Greer BE, Abu-Rustum NR, Apte MS, Campos SM, Cho KR, et al. Cervical Cancer, Version 2.2015: Featured Updates to the NCCN Guidelines. *J Natl Compr Canc Netw.* 2015;13(4):395-404.
4. Willows K, Lennox G, Covens A. Fertility-sparing management in cervical cancer: balancing oncologic outcomes with reproductive success. *Gynecol Oncol Res Pract.* 2016 Oct;3(1):9.
5. Rob L, Skapa P, Robova H. Fertility-sparing surgery in patients with cervical cancer. *Lancet Oncol.* 2011 Feb;12(2):192-200.
6. Sonoda Y. Fertility preservation in patients with cervical cancer. *Oncology journal.* 2015 (cited: 2017 March 27). Available from: <http://www.cancernetwork.com/oncology-journal/fertility-preservation-patients-cervical-cancer>

7. Dargent DB, Roy M, et al. La trachelectomie elargie (TE) une alternative a l'hysterectomie radicale dans le traitement des cancers infiltrants developes sur la face externe du col uterin. *J Obstet Gynaecol.* 1994;2:285–92.
8. Ramirez PT, Schmeler KM, Soliman PT, Frumovitz M. Fertility preservation in patients with early cervical cancer: radical trachelectomy. *Gynecol Oncol.* 2008 Sep;110(3 Suppl 2):S25–8.
9. Royal College of Obstetricians and Gynaecologist. Scientific Impact Paper No. 35. Fertility sparing treatment in gynaecological cancers. London: Royal College of Obstetricians and Gynaecologists; 2013.
10. Ribeiro Cubal AF, Ferreira Carvalho JI, Martins Costa MF, Tavares Branco AP. Fertility sparing surgery for early stage cervical cancer. *International Journal of Surgical Oncology.* 2012 (cited 2017 March 23). Available from: <http://dx.doi.org/https://doi.org/10.1155/2012/936534>.
11. Diaz JP, Sonoda Y, Leitao MM, Zivanovic O, Brown CL, Chi DS, et al. Oncologic outcome of fertility-sparing radical trachelectomy versus radical hysterectomy for stage IB1 cervical carcinoma. *Gynecol Oncol.* 2008 Nov;111(2):255–60.
12. Hauerberg L, Høgdall C, Loft A, Ottosen C, Bjoern SF, Mosgaard BJ, et al. Vaginal Radical Trachelectomy for early stage cervical cancer. Results of the Danish national single center strategy. *Gynecol Oncol.* 2015 Aug;138(2):304–10.