

Pregnancy following Radical Trachelectomy With a Surprisingly Spontaneous Outcome

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BACKGROUND

Radical trachelectomy (RT), also known as a radical cervicectomy, can be performed for women diagnosed with early-stage cervical carcinoma who desire fertility preservation. The procedure involves removal of the cervix, the parametrium, and cuff of vagina; then reattachment of the uterus to the upper vaginal cuff with a permanent suture, thus creating a 'neo-cervix'. Besides obstetric complications of miscarriage, preterm labour, and preterm prelabour rupture of membrane (PPROM), women are also more susceptible to psychological challenges such as emotional detachment.

CASE PRESENTATION

This case presents a 41-year-old G1P0 at 28-weeks gestation, unexpectedly spontaneously conceived, on a background of previous cervical squamous cell carcinoma (Stage IB1) treated eight years prior by neoadjuvant chemotherapy, open abdominal radical trachelectomy and pelvic lymphadenopathy.

She presents with PPRM, GBS positive, and was given antibiotics, steroid- and magnesium-loaded. Two days later, she developed chorioamnionitis with both maternal/fetal compromise. CRP 118 (34) WCC 20.3 (14.1). She underwent an emergency lower segment caesarean section. Baby was born at 1180 grams, with APGAR scores of 5 and 9, at 1-minute and 5-minutes respectively, requiring intubation and NICU admission. The patient's postoperative course was complicated by mild hypertension. Due to multiple failed previous IVF attempts, the entire pregnancy was further psychosocially complicated by a simultaneously pregnant surrogate.

DISCUSSION

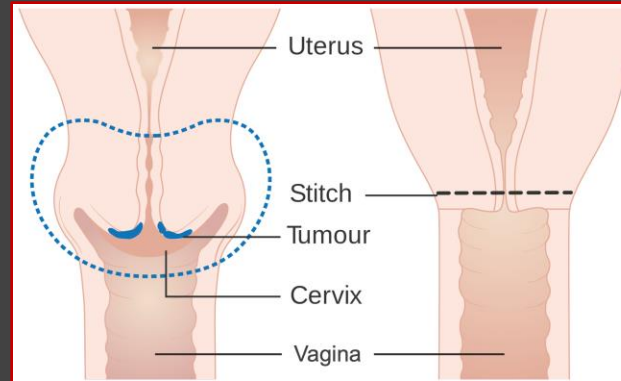
Pregnancy after radical trachelectomy is certainly feasible. Boss *et al*¹ demonstrated that 107 of the 153 patients (70%) attempting to conceive succeeded once, or more than once.

From a physiological perspective, the cervical length, the internal os and endocervical mucous plug all play a vital role in maintaining cervical competence and preventing ascending infection. Therefore, a neo-cervix in women post-RT is postulated to reduce mechanical, biochemical, and immunological barriers, predisposing women to preterm birth, PPRM, and chorioamnionitis.²

In terms of pregnancy outcomes, a systematic review, which totalled 752 pregnancies, by Tirlapur *et al*³ showed that first trimester miscarriage is 16%, which is similar to the general population rate of 15–20%. However, the rate of second trimester miscarriage following RT is 7%, which is higher than the general population rate of 4%. Notably, only 54.8% of women delivered at term.

There is no evidence to recommend consideration of insertion of an additional suture. Vaginal progesterone pessaries have been shown to decrease rates of pre-term labour in asymptomatic women with a short cervix, although not specifically in those who have undergone a RT.⁴

The recommended mode of delivery is caesarean section (CS), as there is risk of uterine rupture and severe haemorrhage with uterine contractions. Traditionally, a classical CS was recommended to avoid the risk of extension of transverse lower segment incisions into the uterine arteries. However, there is growing evidence to support lower segment, or high transverse segment incisions to reduce morbidity and placental implantation issues,³ especially when a lower segment is sufficiently developed. The recommended timing of delivery is at 37-weeks gestation to avoid the risk spontaneous labour.



CONCLUSION

With earlier detection of cervical cancers and increasing demand for fertility-sparing procedures for women of reproductive age, this rare case serves as a reminder for obstetricians to familiarise themselves with management of pregnancies post-trachelectomy complications and routine antenatal care (including vaginal pessary use and fortnightly scans as per updated guidelines). We strongly encourage a multidisciplinary approach in these medically and psychosocially challenging obstetric cases.

RECOMMENDATIONS FOR ANTENATAL CARE POST-TRACHELECTOMY³

- Every woman who becomes pregnant after a trachelectomy should be considered high risk with early referral for consultant-led obstetric care with multidisciplinary input
- Vaginal **progesterone pessaries** may be considered from 12-weeks (200mg twice a day) until 36 weeks
- Serial **fortnightly isthmic length scans**
- Urine should be tested for **culture and sensitivity** and vaginal cultures for bacterial vaginosis at the first obstetric visit, and any infections should be treated. Additionally, consider **prophylactic antibiotics** if clinically indicated at 16 and 24 weeks
- Consider a course of two doses of **prophylactic steroids** from 24 weeks of gestation if there are signs of preterm labour or delivery appears imminent
- Avoid unnecessary vaginal digital examinations
- Consider avoiding sexual intercourse from 20 weeks onwards as this may be a source of infection
- Consider avoiding strenuous activities such as heavy lifting, exercise or prolonged periods of standing in the second trimester onwards
- Avoid elective dental work during pregnancy to minimise risks of infection and preterm birth resulting from periodontitis
- Commence antibiotics and prophylactic steroids if premature rupture of membranes occurs with a view to deliver as soon as possible
- Aim to **deliver by elective caesarean section around 37 weeks**, but maintain a low threshold for delivery in case of preterm prelabour rupture of membranes as there is a high risk of subclinical chorioamnionitis.

References

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