

# Anterior cervical wall rupture as a result of induced abortion

## İndüklenmiş abortusun bir sonucu olarak ön servikal duvar rüptürü

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**Received/Accepted:** December 01, 2014/November 24, 2015

**Conflict of interest:** There is not a conflict of interest.

### SUMMARY

A thirty-seven year-old multiparous (seven prior vaginal delivery) pregnant woman was referred because her fetus was diagnosed as Trisomy 21 via amniocentesis. The family chose the way of termination. Medical abortion with oxytocin was initiated. No significant cervical dilatation was observed until 8th hours. After 9 hours of induction, dead fetus was expelled with its placenta and fetal membranes. Cervicovaginal exploration after abortion revealed that anterior cervical wall had ruptured towards anterior vaginal fornix, measuring 35x15 millimeters, window shaped, fetus and its appendices had expelled from there. External cervical ostium was closed. It was learned that the patient had experienced no problem during prior vaginal deliveries. Rupture area was repaired. She had no problem in postoperative two days and was discharged healthily. Cervical resistance to dilatation might have caused such a rare complication, irrespective of any cause. It's important to notice the extension of rupture and repair the wound.

**Keywords:** Induced abortion, uterine rupture, complication

### ÖZET

Otuz yedi yaşında multipar (daha önce 7 kez vajinal doğum yapmış) gebe hasta, amniyosentez sonucu olarak Trizomi 21 tanısı konulması üzerine perinatoloji kliniğimize yönlendirildi. Hasta ve ailesi terminasyon yolunu seçti. İndüklenmiş tıbbi düşük tedavisi başlandı. Sekiz saat boyunca herhangi bir servikal açılma gözlenmedi. 9 saat süreli indüksiyon sonrası, fetus ölü halde, plasenta ve fetal zarları ile uterusun vajene doğru çıktı. Düşük sonrası yapılan servikovajinal muayenede, serviksin ön duvarında, ön vajinal fornikse doğru, 35x15 milimetre boyutlarında pencere şekilli olan rüptür alanından fetus ve eklerinin atıldığı, serviksin dış ağzının kapalı olduğu gözlemlendi. Hastanın geçirilmiş vajinal doğumlarının sorunsuz olduğu öğrenildi. Rüptür alanı tamir edildi. Hasta ameliyattan sonraki sorunsuz geçen iki gün ardından şifa ile taburcu edildi. Serviksin açılmaya karşı direnci, nedeninden bağımsız olarak böyle nadir bir komplikasyona yol açabilir. Yaranın uzandığı organların farkedilip, yaranın onarılması önemlidir.

**Anahtar sözcükler:** Uyarılmış abortus, uterus rüptürü, komplikasyon

### INTRODUCTION

In everyday practice of obstetricians, patients who learned to have an anomalous fetus have been applying to clinicians, demanding for induced abortion, especially in the second trimester of their pregnancy. As it could be seen in any circumstances about surgical or medical practice, compli-

cations might occur. Cervical rupture is one of them as a result of induced abortion. It's important to find out whether its extension to neighbouring organs and/or spaces (urinary bladder, peritoneal cavity, parametrial area) existed. We aimed to attract some attention to such a rare clinical condition.

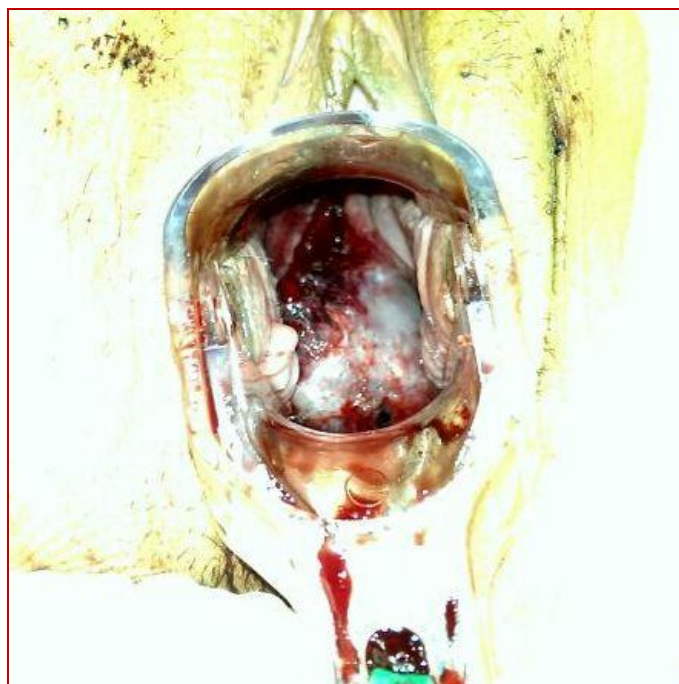
## CASE REPORT

A thirty-seven year-old multiparous (seven prior vaginal delivery) pregnant woman at 19 weeks of gestation was referred to the care center of perinatology in Ankara, because her fetus was diagnosed as Trisomy 21 via amniocentesis. The patient and her husband chose the way of termination of pregnancy. An informed consent was obtained and medical abortion with oxytocin was planned. Intravenous infusion of 10 units of oxytocin in 500 mL (milliliter) 5% dextrose saline solution for 3 hours was used for induced abortion, repeating 3 times in 9 hours, totally.

No significant dilatation was observed until 8th hours with cervical examination performed hourly. After 9 hours of induction, dead fetus was expelled with its placenta and fetal membranes. Visible haemorrhage could be seen after expulsion. Cervicovaginal exploration after abortion revealed that anterior cervical wall had ruptured near a bit right side of the midline, measuring 35x15 millimeters, as a window and fetus and its appendices had expelled from there. Cervical dilatation was 8 millimeters, effacement was scarcely

30 per cent (Figure 1). Post-abortion ultrasonographic evaluation revealed no sign of extension of rupture towards neighbour structures and parametrial area. Endometrial cavity was linear, normally. It was queried and learned that the patient had experienced no problem during prior vaginal deliveries and had not undergone any curettage or cervical operation. Under intravenous sedation, an 18 french urinary catheter was applied from the urethra and urine was seen clearly. Then a number 8 vacuum aspiration catheter was applied from external ostium of the cervix in order to save the passage of cervical canal. Rupture area was repaired with primary suturation, using number 1 polyglactin 910 material (Figure 2). No antibiotic prophylaxis was prescribed, because the wound area was clean. The patient had no problem in postoperative two days and was discharged healthily. We offered her to use an effective contraceptive method.

The patient was examined after 30 days from abortion. Cervicovaginal examination was uneventful as an ordinary multiparous woman. Wound healing was satisfying for 30th day after the operation.



**Figure 1: Cervical rupture before repair.**



**Figure 2: Cervical rupture after repair.**

## DISCUSSION

Anterior cervical rupture during elective second trimester abortion is an uncommon, but potentially serious complication. We chose oxytocin for induction because of grand-multiparity of the patient, avoiding uterine rupture. There is no similar case report with oxytocin regimen according to our comprehensive literature search. The exact incidence is not known. Agarwal et al.<sup>1</sup> presented a case of anterior cervical rupture with the use of prostaglandin-E<sub>2</sub> instilled to amniotic cavity.

Yapar et al.<sup>2</sup>, in their prospective randomized study of mid-trimester abortion compared five different methods including transcervical balloon, prostaglandins and oxytocin infusion in 400 patients who had unfavourable rigid cervix. In that study, oxytocin regimen was suggested as a safe but weak method before 24 weeks gestation. One of 36 patients who was given oxytocin infusion with the diagnosis of fetal death at 24 weeks gestation died due to uterine rupture including right uterine artery.

Kajanaja et al.<sup>3</sup> reported the incidence of cervical rupture to be 2.7%, in their expe-

rience of 412 patients with elective mid-trimester abortion with prostaglandins. Three cases had posterior cervical rupture, one had lateral rupture extending to external os and one had anterior rupture. Wentz et al.<sup>4</sup> stated the incidence of transverse cervical rupture to be 2% in their series of 102 elective second trimester abortions with prostaglandins. In those two cases, the posterior lip of cervix was involved. They described that cervico-vaginal fistulas may form after such complications.

It is controversial why does cervix respond in this way. Anything that causes cervical resistance against dilatation may simplify such a complication. A scarred cervix may be prone to rupture. Skajaa has postulated that rupture occurs when the external os is relatively inelastic<sup>5</sup>. Of course, prior cervical traumatic lesions may give way this alike. Multiparity is also a determinant to be accused. Cervical laceration can occur after either dilatation and evacuation (D&E) or medical induction. A retrospective cohort study by Autry et al.<sup>6</sup> found no significant difference in the incidence of cervical laceration needing repair among women who underwent D&E compared to those who underwent medical induction.

Induced abortion may give way to some complications as in this case. The exact incidence of it is not known. Cervical resistance to dilatation despite contracted uterus might have caused such a rare complication, irrespective of any cause. The extension of the rupture towards neighbouring tissues such as urinary bladder, uterine corpus, parametrium or uterine artery seems to determine the prognosis. It's difficult to predict, because it doesn't have any antecedent symptom. It's important to notice and repair the wound.

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