CASE REPORT

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Amnioreduction in Emergency Rescue Cervical Cerclage with Bulging Membranes

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ABSTRACT

Introduction: Emergency cerclage in the second trimester is established treatment for a dilated cervix. **Aim:** To report a case of a successful cerclage performed in a 33-year old woman in her second pregnancy, after 5 years of non-successful pregnancy outcomes. **Case report:** In her fourth month of pregnancy, the patient was hospitalized because of suprapubic pressure. After complete laboratory results, ultrasound and vaginal examination the patient was diagnosed with cervical shortening, cervical canal was opened 3cm, with prolapse and bulging of the fetal membranes in vagina. An amount of 120 ml of clear amniotic fluid was removed transabdominally under ultrasound guidance, and sent to the microbiological and genetical analysis. McDonald emergency cerclage of the cervical canal was performed. Patient was monitored few days on department and released home with advice of strict reduction of activity to minimum, and prescribed therapy due to that: antithrombotic, progesterone and antibiotic therapy. **Conclusion:** Amnioreduction at the time of emergency cerclage placement is associated with a lower rate of extreme prematurity and related neonatal morbidity. Successful outcome is not impossible, along with adequate antibiotic regimen, bed rest and regular obstetrical control/checkup.

Keywords: cervix, amniotic fluid, pregnancy, treatment.

1. INTRODUCTION

Emergency cerclage in the second trimester is established treatment for a dilated cervix (1, 2). In cases with advanced cervical dilatation and bulging membranes, it has been referred to as “heroic cerclage” due to its poor success rate (1).

2. AIM

To report a case of a successful cerclage performed in a 33-year old woman in her second pregnancy, after 5 years of non-successful pregnancy outcomes.

3. CASE REPORT

Patient was trying for 5 years to get pregnant. In May 2017, she had one spontaneous abortion in very early gestation week (biochemical pregnancy). Husband's spermogram test was normal. Patient was regularly gynecologically examined with regular PAP smear. Patient was moderately obese. Current pregnancy was spontaneously conceived. In eighteen week because of suprapubic pressure the patient was hospitalized at Pathology department, Clinic of Gynecology and Obstetrics, Clin-

ical Center University of Sarajevo. After complete laboratory results, ultrasound and vaginal examination the patient was diagnosed with cervical shortening, cervical canal was opened 3cm, with prolapse and bulging of the fetal membranes in vagina. There were no clinical and laboratory signs of infection. Ultrasound examination revealed normal amniotic fluid index and dynamically vital fetus. Patients routine antenatal screen failed to reveal any abnormality. Amniotic fluid reduction was performed. The protruding sac of membranes was under considerably less tension. An amount of 120 ml of clear amniotic fluid was removed transabdominally under ultrasound guidance, and sent to the microbiological and genetical analysis. Prior to the operative procedure, patient was administered with two antibiotics (ceftriaxone, azithromycin), and as a tocolytic agent hydroxyprogesterone 250mg/ml and indomethacin tablets 100mg were used. McDonald emergency cerclage of the cervical canal was performed. During the operation, as a tocolytic agent intravenous nitroglycerin was used in dose

of 100mcg. Patient was monitored few days on department and released home with advice of strict reduction of activity to minimum, and prescribed therapy due to that: antithrombotic, progesterone and antibiotic therapy. Regular checkups were done. First control checkup was performed one week later, and after that followed regularly every ten days. Vaginal and vulvar smear was done at 35 week of gestation. Enterococcus faecalis was isolated and antibiotic regimen of amoxicillin was administered for 5 days. Local vaginal antibiotic therapy was administered twice during the checkup period. On 29. 03. 2018., the patient comes to the clinic in 35+2 week of gestation, with regular contractions, ruptured membranes and the suture of cerclage in place. During vaginal exam, we removed cerclage and it showed dilatation of 6 cm, head presentation with evident preterm premature rupture of membranes (PPROM) (clear color of amniotic fluid noted). She was admitted immediately to the delivery room where she delivered eutrophic female newborn, weight 2250 grams, length 47cm, with Apgar score of 9/10. During delivery umbilical cord was tied 1x around baby's right ankle- thus inverting the foot. Placenta was delivered short after. After revision of birth canal, perineal rupture of I degree was noted, and sutured accordingly. Patient continued antibiotic regimen (cefazolin), with control of laboratory values.

4. DISCUSSION

Cervical incompetence is shortening of cervix before term, treated when it threatens pregnancy using a surgical technique: cervical cerclage. It is well recognized cause of recurrent mid-trimester pregnancy loss (3, 4, 5). This surgical technique reinforces the cervical muscle by placing sutures above the opening of the cervix to narrow the cervical canal, usually done between 12-16 week of gestation or urgently later during second trimester. Under the ideal conditions, the fetal survival rate increases from 20% to 78-87% after elective cerclage (6, 7). Without screening and surveillance, cervical incompetence may not be diagnosed until patient presents with painless dilatation of the cervix and fetal membranes protruding through dilated cervix. Unexpected cervical incompetence sometimes followed by lower abdominal pain, pain in the back or as premenstrual pain with increased vaginal secretion and sometimes blood (8). Such presentation is high risk for both mother and fetus, demanding emergency management if the pregnancy is to be salvaged. Fetal survival rates of 48-68% have been reported after emergency cerclage (1, 9). By vaginal speculum examination, the burst of fetal membranes should be excluded. If fetal membranes are visible and are bulging into the vagina, the prognosis of the neonatal survival is dramatically decreased, but emergency cerclage can be attempted (1, 3). The decrease of intra amniotic pressure facilitates the reposition of bulging fetal membranes and insertion of cerclage (1). Infection is the most frequent cause and complication that follow this state, so it is important to find the signs of infection (1, 2). It is important to point out that every effort should be made to perform cervical cerclage at or before 26 weeks of gestation (4).

5. CONCLUSION

Amnioreduction at the time of emergency cerclage placement is associated with a lower rate of extreme prematurity and related neonatal morbidity. The procedure prolonged pregnancy from 18 to 35 week of gestation successfully, with delivery of a healthy eutrophic newborn with high Apgar score. The need for cerclage in the second trimester of pregnancy is not rare. According to our experience, we advise cervical cerclage with amnioreduction in pregnant women with advanced dilatation and bulging membranes in the second trimester. Despite generally bad prognosis, successful outcome is not impossible, along with adequate antibiotic regimen, bed rest and regular obstetrical control/checkup.

- **Declaration of patient consent:** The authors certify that they have obtained all appropriate patient consent forms.
- **Author's contribution:** EM, AK, ZB and AM gave substantial contribution to the conception or design of the work and in the acquisition, analysis and interpretation of data for the work. AK had role in drafting the work and revising it critically for important intellectual content. Each author gave final approval of the version to be published and they agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
- **Conflicts of interest:** There are no conflicts of interest.
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