Cervical pessary for prevention of spontaneous preterm birth: a single italian center experience

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Introduction

Preterm birth, defined as delivery before 37 weeks of gestation, is an important complication of both singleton and multifetal pregnancies worldwide. The identification of women at risk is important, as several treatment strategies have been effective in the reduction of spontaneous preterm birth. The risk of spontaneous preterm birth is increased in women with no obstetric history but with a mid-pregnancy short cervix and in women with an history of prior preterm birth. As more than 50% of all women with twin pregnancies deliver after 37 weeks of gestation, we decided to evaluate the impact of Arabin cervical pessary use for prevention of preterm birth in twin pregnancies with a mid-trimester short cervix; however, studies remains controversial.

The cervical pessary is a soft and flexible silicone device, used since 1959. Although the exact mechanism of the cervical pessary remains unknown, it has been hypothesized that the pessary relieves direct pressure on the internal cervical os by changing the position of the cervical canal and distributing the weight of the pregnant uterus. Hence, it may prevent premature dilatation of the cervix and premature rupture of the membranes. Another possible mechanism is that the pessary might support the immunological barrier between chorioamnion-extraovular space and the vaginal microbiological flora.

In low risk singleton women without a history of preterm birth, cervical length measurements may be of value to identify women at risk for preterm birth. When a mid-trimester measurement of the cervix of 25 mm is detected, women can be offered treatment with cervical pessary. In multiple pregnancies, cervical length measurement may be of value to identify women at higher risk for preterm birth. Cervical pessary may be beneficial to reduce the risk of preterm birth in twin pregnancies with a mid-trimester short cervical length; however, studies remains controversial.

Objective

to evaluate the impact of Arabin cervical pessary use for prevention of preterm birth in a single fetal medicine center, both in singleton and multiple gestation.

Methods

We proposed cervical pessary placement to all women between 20 and 24 weeks of pregnancy with cervical length less than 25 mm, both single or twins gestations. We also proposed cervical pessary to all women in high risk pregnancy for preterm birth due to presence of multiple fetuses such as triplets ore more, regardless of cervical length.

We placed 39 Arabin’s pessary from september 2011 to may 2016, 24 in twin gestations (1 quadruplet and 2 triplets) and 15 in singleton. There were 4 cases of monochorionic twins gestations. In the quadruplet and triplets ones the cervical length was regular at the time of insertion (>25 mm), All cases of single gestation presented cervical length less than 25 mm. In 7 cases cervical length was less than 15 mm. Cervical and vaginal swabs were taken from all patients for bacteriological analysis before insertion. No patients presented contractile activity. 200 mg progesterone in vaginal suppositories was administered daily to every patient. Nobody presented collateral effect such as discomfort or discarge because of the presence of the pessary. Every women was followed in our centre with periodical outpatient controls (transvaginal sonographic cervical measurement), till the day of pessary removal.

Results

Pessary was removed at 37 weeks of gestation in 23 patients, who delivered at term between 37 and 41 weeks of pregnancy, at 34 weeks in 4 patients (monochorionic twin gestations) and at 32 weeks in triplets. In one case of monochorionic twins pessary was removed at 27 weeks due to contractile activity, but after steroid somministration for lung maturity induction. Some cases are now ongoing.

Conclusion

in our experience, Arabin cervical pessary is useful to prevent preterm birth in high risk women with cervical length less than 25 mm or in patients that are at risk for preterm birth because of multiple pregnancy such as twin gestation especially if triplets.

References