

Cervical pessary and vaginal progesterone to treat prematurity in short cervix

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Objective

Cervical length (CL) is associated with the risk of preterm birth (PTB). The use of cervical pessary is an open possibility to treatment in high-risk patients with short CL. However, the studies about pessary are inconclusive under its efficacy. This study aims to investigate the difference between pregnancies with short CL, using only vaginal progesterone and cervical pessary plus vaginal progesterone.

Methods

This prospective case control study was undertaken in a single hospital in Brazil. This study used a pessary named Modified Pessary AM, developed in Brazil, with subtle but important differences if compared with Arabin Pessary, it's more rigid, and it's regulated by Health Regulatory Authority in Brazil (ANVISA). Pregnant women (aged 17–40 years) with a cervical length of 25 mm or less, between 16 and 26 weeks and 6 days were included after signing a consent form to use the cervical pessary plus 200 mg of vaginal progesterone (Group Case) or only the same dose of vaginal progesterone in control group (Group Control). The primary outcome was spontaneous delivery before 34 weeks of gestation. Analysis was by intention to treat. The analysis of data was performed considering, mean of CL, gestational age (GA) of delivery (SD), percentage of delivery under 34 weeks, weight at birth (SD), and a comparison of weight of delivery and gestational age at birth in PPPG, if diagnosis was performed before 23 weeks. The statistical analysis was performed using Pearson Chi-squared test for non-parametrics analysis and Student T test for parametrics analysis.

Results

Pessary group included 47 pregnancies and control group, 16 pregnancies. The baseline characteristics show no differences between the groups, regarding age; previous preterm birth; CL at diagnoses or pessary attachment; CL below 15 mm; the occurrence of funneling and sludge; and type of delivery. The mean of CL was $15,9 \pm 5,7$ mm for pessary group, compared to $17,5 \pm 5,2$ mm for control group ($P = 0,27$). The mean gestational age at delivery was $36w 4d \pm 24d$ for pessary group, against $34w 1d \pm 38d$ ($P=0,04^*$). The percentage of delivery below 34 weeks for pessary group was 12%, against 31% of control group ($P = 0,04^*$). The mean weight at birth for pessary group was $2837g \pm 736g$, compared to $2241g \pm 815g$ ($P = 0,009^*$). The pessary group was subdivided in two groups in accordance with the time of diagnosis of short cervix. In group below 23 weeks ($n= 16$) the mean of weight at delivery was $2684g \pm 902g$ and in group above 23 weeks ($n= 31$), it was $2921g \pm 628g$ ($P=0,30$) and the mean of gestational age at birth was $35w 6d \pm 31d$, below 23 weeks, compared to $37w \pm 19d$ ($P= 0,29$), above 23 weeks, showing no difference between those subdivided groups.

Conclusion

This study shows that cervical pessary associated with vaginal progesterone could be an alternative treatment in high-risk patients with short cervix in singleton pregnancies.