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### ► To cite this version:

Erdogan Nohuz, Maël Albaut, Marie Szymanowski, Angélique Brunel, Didier Lemery, et al.. Combined Endoloop® ligation and pessary cerclage devices for delayed interval delivery: A first case report. Taiwanese Journal of Obstetrics & Gynecology, 2019, 58 (4), pp.579-580. 10.1016/j.tjog.2019.05.028 . hal-03030457

**HAL Id: hal-03030457**

**<https://hal.science/hal-03030457v1>**

Submitted on 25 Oct 2021

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**Type of the article:** Research Letter

**Combined Endoloop<sup>®</sup> ligation and pessary cerclage devices for delayed interval delivery: a first case report**

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**The authors have no conflicts of interests relevant to this article.**

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**Keywords**

Delayed interval delivery; Multiple Pregnancy; Cervical pessary; Cerclage; Cord ligation; Endoloop

**Word count: 500**

**Combined Endoloop<sup>®</sup> ligation and pessary cerclage devices for delayed interval delivery: a first case report**

*Dear Editor,*

A delayed-interval delivery in case of multiple pregnancy to improve survival among the latter-born siblings remains a rare event. We report a case of delayed delivery of one twin through the use of an Endoloop<sup>®</sup> and a cervical pessary.

A 29-year-old woman with dichorionic diamniotic twins experienced contractions and severe vaginal bleeding in the 17<sup>th</sup> week of pregnancy. The cervix was dilated to 5 cm. The contractions and vaginal bleeding stopped after the spontaneous expulsion of one of the fetuses, approximately 1 hour after the admission. On ultrasound, the other fetus was viable, surrounded by a normal amount of amniotic fluid. There were no clinical or laboratory signs of chorioamnionitis. Prophylactic antibiotics (amoxicillin/clavulanic acid) were administered. The prolapsed cord of the aborted fetus was ligated as close as possible to the placenta under digital control using the Endoloop<sup>®</sup> ligature (Ethicon-Somerville-NJ-USA) under general anesthesia. An Arabin<sup>®</sup> cervical pessary (GmbH-Witten-Germany) was then placed (Figure 1). Antibiotic prophylaxis (1 g amoxicillin/clavulanic acid every 8 hours) for 7 days has been introduced. During the interval period, therapy with progesterone and nifedipine was orally administered and the betamethasone-induced lung maturation performed. After a latency interval of 53 days, the pessary was removed at 25<sup>th</sup> weeks and 3 days because of reappearance of uterine contractions despite the atosiban' use. The second male weighing 850 g was delivered. Apgar scores were 0-0-6 at 1, 5 and 10 min respectively. Placental delivery was performed manually.

“The vaginal swab was normal. Neonatal gastric aspirate sample was proved negative. With regard to the placenta, bacteriological sampling did not reveal any germ while

pathological examination highlighted a chorioamnionitis with leukocyte infiltration possibly suggestive of a *Listeria monocytogenes* chorioamnionitis.”

The discharge occurred after 94 days, when the baby weighed 2,810 g. At the age of 36 months the child showed normal development.

A delayed-interval delivery may improve neonatal survival and decrease neonatal morbidity among the latter-born siblings. However, there is no consensus on the optimal management technique of these situations [1]. After birth of the first fetus, it is mandatory to tie its umbilical cord as high as possible away from the vaginal cavity thereby further reducing the infection risks due to maceration and the ascension of microorganisms. The Endoloop<sup>®</sup> device which is routinely used to perform ligation through self-locking sliding knots during laparoscopic procedures, permits easy access to a more proximal position, beyond the internal uterine os, nearer the origin of the umbilical cord [2,3]. Immediate cerclage appears associated with a significantly longer inter-delivery interval. This may minimize the exposure of fetal membranes to vaginal bacteria and acidity, prolonging delay interval [4]. Nevertheless, increased risk of intrauterine infection after cervical cerclage remains controversial. We opted for a pessary in order to be able to easily remove the cerclage in the event of signs of infection of the ovular cavity. This technique should be considered in the absence of exclusion criteria as fetal pathology, monochorionicity, placenta previa or pre-eclampsia. The risks and benefits for both retained fetus and mother must be reasonably discussed between the medical team and the couple.

In conclusion, Endoloop<sup>®</sup> ligation of an aborted fetus' umbilical cord and use of the cervical pessary for the remaining fetus may be an alternative for the continuation of the pregnancy. This is the first case-report combining these two devices to maintain a gestation with a favorable outcome.

**The authors have no conflicts of interests relevant to this article.**

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**Figure legends**

**Figure 1: Steps of the management.**

Ligature of the aborted fetus' cord using an Endoloop® device (A-D: in title-block, the resected cord), washing with warm physiological saline (E) and placement of a cervical pessary (F). Photography of the child after its hospital discharge (G).

