



**Date of Search:** 07 Feb 2017

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## Arabin Pessaries

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### **According to product information:**

*'Under normal conditions, the pessary should be removed at around 37 weeks in asymptomatic patients. In cases of blood loss it may be changed and cleaned in between, but in general, manipulations are better avoided. In all patients with premature rupture of membranes and signs of chorioamnionitis, vaginal blood loss and severe painful contractions the pessary should be removed to avoid cervical lesions or ascending infection.'*

### **Sources:**

Dr Arabin's product information:

URL: <http://www.dr-arabin.de/cerclage-pessary-non-perforated> [Last Accessed 07 Feb 2017]

FAQs for staff for women with the ARABIN cervical pessary fitted in STOPPIT2

URL: <https://w3.abdn.ac.uk/hsru/stoppit2/Public/Download.aspx?ID=104> [Last Accessed 07 Feb 2017]

## **1. Maternal sepsis complicating arabin cervical pessary placement for the prevention of preterm birth: a case report.**

**Author(s):** Martinez de Tejada, Begoña

**Source:** BMC pregnancy and childbirth; Jan 2017; vol. 17 (no. 1); p. 34

**Publication Date:** Jan 2017

**Publication Type(s):** Journal Article

Available in full text at [BMC Pregnancy and Childbirth](#) - from BioMed Central

Available in full text at [BMC Pregnancy and Childbirth](#) - from ProQuest

**Abstract:**Preterm delivery is a major health problem and contributes to more than 50% of all neonatal and infant deaths. Recently, there has been a renewed interest in the use of cervical pessaries as a safe and effective intervention with few maternal side-effects for the prevention of preterm birth in both single and twin pregnancies. A 43-year-old gravida 5, para 1 (previous preterm birth at 24 weeks) patient with an in vitro fertilization twin pregnancy had an Arabin cervical pessary placed at 19 weeks of pregnancy due to the presence of cervical funneling identified by ultrasound screening. She developed chorioamnionitis and sepsis and delivered at 21 3/7 weeks after extraction of the pessary. Severe maternal infection may complicate pessary treatment for the prevention of preterm birth. Careful follow-up is necessary in women with a cervical pessary during pregnancy, particularly when important funneling is present.

**Database:** Medline

## **2. Cervical pessary for preventing preterm birth in twin pregnancies with short cervical length: a systematic review and meta-analysis.**

**Author(s):** Saccone, Gabriele; Ciardulli, Andrea; Xodo, Serena; Dugoff, Lorraine; Ludmir, Jack; D'Antonio, Francesco; Boito, Simona; Olearo, Elena; Votino, Carmela; Maruotti, Giuseppe Maria; Rizzo, Giuseppe; Martinelli, Pasquale; Berghella, Vincenzo

**Source:** The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians; Jan 2017 ; p. 1-8

**Publication Date:** Jan 2017

**Publication Type(s):** Journal Article

Available in full text at [Journal of Maternal-Fetal and Neonatal Medicine, The](#) - from Taylor & Francis

**Abstract:**To evaluate the effectiveness of cervical pessary for preventing spontaneous preterm birth (SPTB) in twin pregnancies with an asymptomatic transvaginal ultrasound cervical length (TVU CL) in the second trimester. We performed a meta-analysis including all randomized clinical trials (RCTs) comparing the use of cervical pessary (i.e. intervention group) with expectant management (i.e. control group). The primary outcome was incidence of SPTB <34 weeks. Three trials, including 481 twin pregnancies with short cervix, were analyzed. Two RCTs defined short cervix as TVU CL  $\leq 25$  mm and one as TVU CL  $\leq 38$  mm. Pessary was not associated with prevention of SPTB, and the mean gestational age at delivery and the mean latency were similar in the pessary group compared to the control group. Moreover, no benefits were noticed in neonatal outcomes. Use of the Arabin pessary in twin pregnancies with short TVU CL at 16-24 weeks does not prevent SPTB or improve perinatal outcome.

**Database:** Medline

### **3. The efficacy of insertion of the Arabin pessaries for correction of cervical incompetence and prevention of preterm birth**

**Author(s):** Bespalova O.; Sargsyan G.

**Source:** Gynecological Endocrinology; 2016; vol. 32 ; p. 155

**Publication Date:** 2016

**Publication Type(s):** Journal: Conference Abstract

**Abstract:**Context: The rate of preterm birth (PB) in Russia is 14%, in St. Petersburg up to 18%. PB syndrome is a multifactorial pathology, which is caused by both uterine contractile activity and structural changes of the uterine cervix in 22-36 weeks of gestation. In up to 50% of cases CI is the major cause of preterm birth. Objective: To evaluate the efficacy of Arabin Pessary (AP) insertion for CI correction and prevention of PB. Methods and Interventions: All pregnant women included in the study were classified into 6 groups: I - 29 with CI in II trimester, II - 86 with CI in the III trimester, III - 46 with threatening preterm delivery, IV - 12 with CI and cervical suture, V - 4 with a history of preterm birth, VI -12 with a multiple pregnancy. The average term of AP insertion were as follows: I - 18.9+/-0.2; II - 25.4+/-0.6, III - 24.1+/-0.7, IV - 18.3+/-0.2, V - 25.6+/-0.1, VI - 22.1+/-0.1 weeks of gestation. All patients received conserving therapy, prevention of fetal RDS, physical and sexual rest. PB before 28 weeks of gestation were registered in Groups I, IV and VI (20.6%, 16.6%, 8.3%). PB in 29-34 weeks of gestation were in Groups I, II and VI (11.5%, 13.9%, 8.3%). PB in 35-37 weeks of gestation occurred in Group VI (50%), PB was not registered in V Group, and the PB rate did not differ in other groups. Most often term deliveries were registered in V -100% and III -91.3% groups, less in groups I, II, IV (57.7%, 69.8%, 66.6%); the lowest rate was in VI group (33.3%). Patients: Overall, we analyzed the outcomes of pregnancy and childbirth in 189 patients treated with AP. Results: The use of the AP in groups with threatening pregnancy termination as a prophylactic measure allows to prolong pregnancy to full-term in 95.6% cases, and in groups with CI in 65% of case. Conclusions: We have noted a high efficacy of CI correction by use of the Arabin pessary in the complex PB preserving therapy.

**Database:** EMBASE

### **4. The efficacy of insertion of the Arabin pessaries for correction of cervical incompetence and prevention of preterm birth**

**Author(s):** Bespalova O.; Sargsyan G.; Ailamazyan E.

**Source:** Giornale Italiano di Ostetricia e Ginecologia; 2016; vol. 38 (no. 1); p. 47-51

**Publication Date:** 2016

**Publication Type(s):** Journal: Article

Available in full text at [Giornale Italiano di Ostetricia e Ginecologia](#) - from Free Access Content

**Database:** EMBASE

## **5. Comparative assessment of arabin pessary, cervical cerclage and medical management for preterm birth prevention in high-risk pregnancies**

**Author(s):** Barinov S.V.; Shamina I.V.; Lazareva O.V.; Tirskaia Y.I.; Ralko V.V.; Shkabarnya L.L.; Dikke G.B.; Kochev D.M.; Klementyeva L.L.

**Source:** Journal of Maternal-Fetal and Neonatal Medicine; Sep 2016 ; p. 1-6

**Publication Date:** Sep 2016

**Publication Type(s):** Journal: Article In Press

Available in full text at [Journal of Maternal-Fetal and Neonatal Medicine, The](#) - from Taylor & Francis

**Abstract:**Objective: This study aimed to compare the efficacy of combined use of Arabin pessary, cervical cerclage and progesterone with progesterone-only management of pregnant women at high risk of preterm birth. Materials and methods: The study included 203 pregnant women at high risk of preterm birth who were randomised to receive Arabin pessary (Group 1, n=82) and progesterone, circular cervical cerclage and progesterone (Group 2, n=121) or progesterone treatment only (Group 3, controls, n=50). Patients in the pessary and cerclage group also received progesterone. Results: The use of Arabin pessary combined with progesterone resulted in a 2.5-fold decrease in the rate of vaginal dysbiosis in pregnancy ( $p=0.015$ ) and almost three-fold reduction in the postpartum period ( $p=0.037$ ), combined with circular cervical cerclage and progesterone. Suture eruption was observed in 4.3% of women. In patients with abnormal placental location, placental migration was observed in 62.1% of patients in Group I, 52.1% in Group II and a significantly lower proportion of patients (14.0%) in Group III ( $p=0.001$ ). Bleeding during pregnancy was observed significantly more often in both comparison groups ( $p=0.005$ ). Incidence of intrapartum bleeding was 17.4% ( $p=0.011$ ) in Group II and 24.5% in Group III ( $p=0.002$ ). Intrapartum chorioamnionitis was observed in 4.3% of patients in Group II and 2.04% of patients in Group III. Conclusions: The use of Arabin pessary combined with progesterone reduces the rate of infectious complications and bleeding during pregnancy and the postpartum period. Copyright © 2016 Informa UK Limited, trading as Taylor & Francis Group.

**Database:** EMBASE

## **6. Arabin cervical pessary to prevent preterm birth in twin pregnancies with short cervix**

**Author(s):** Di Tommaso M.; Seravalli V.; Sisti G.; Arduino S.; Bossotti C.; Todros T.

**Source:** Journal of Obstetrics and Gynaecology; Aug 2016; vol. 36 (no. 6); p. 715-718

**Publication Date:** Aug 2016

**Publication Type(s):** Journal: Article

Available in full text at [Journal of Obstetrics and Gynaecology](#) - from Taylor & Francis

**Abstract:**A retrospective study was conducted to evaluate the effect of Arabin cervical pessary in twin pregnancies with cervical length (CL) <25 mm between 21 and 31 weeks. Forty patients receiving pessary were matched with 40 controls without pessary. They were matched for gestational age (GA) at admission and CL. GA at delivery, delivery before 36, 34 and 32 weeks, latency between detection of short cervix and delivery, and duration of hospital admission were compared between groups. Women with the pessary delivered at higher GA compared to controls (35 vs. 33 weeks,  $p = 0.02$ ). Cervical pessary significantly reduced the incidence of delivery <36 and < 34 weeks ( $p < 0.05$ ), but not before 32 weeks. Interval between detection of short cervix and delivery was longer in the pessary group and duration of hospital admission was shorter ( $p = 0.03$ ) compared to women without pessary. Copyright © 2016 Informa UK Limited, trading as Taylor & Francis Group.

**Database:** EMBASE

## **7. Modification of cervical length after cervical pessary insertion: correlation weeks of gestation**

**Author(s):** Mendoza M.; Goya M.; Gascon A.; Pratorcorona L.; Merced C.; Rodo C.; Carreras E.; Cabero L.; Valle L.; Romero A.; Juan M.; Rodriguez A.; Munoz B.; Santacruz B.

**Source:** Journal of Maternal-Fetal and Neonatal Medicine; Aug 2016 ; p. 1-6

**Publication Date:** Aug 2016

**Publication Type(s):** Journal: Article In Press

Available in full text at [Journal of Maternal-Fetal and Neonatal Medicine, The](#) - from Taylor & Francis

**Abstract:** Objectives: To observe the modifications in cervical length (CL) in patients with and without cervical pessary (Arabin ASQ 65/25/32) and correlate these modifications with gestational age at delivery. Study design: Prospective study of asymptomatic singleton pregnancies (PECEP-Trial) between weeks 20+0 and 23+6 with maternal short cervix (<25mm) randomised into two groups: expectant management and cervical pessary. Results: This study included 380 pregnant women: 190 with pessary and 190 without pessary. Mean CL in both groups at the time of randomisation showed no statistically-significant differences (pessary group: 19.0mm and management group: 19.0mm;  $p=0.9$ ). Mean CL measured after randomisation was 15.4mm in patients of the expectant management group and 21.5mm in the pessary group. These differences were statistically significant ( $p<0.0001$ ). When means at randomisation and at the second measurement were compared, CL had decreased by 3.6mm in the expectant management group and increased by 2.6mm in the pessary group; this difference was statistically significant ( $p<0.0001$ ). Coefficients of correlation showed that among patients of both groups with the same CL at 20 weeks of gestation, those with a pessary gave birth later. Conclusions: Insertion of an Arabin cervical pessary increased CL in asymptomatic patients with a short cervix, which correlated with shorter gestational age at delivery. The cervical pessary halted the progressive decrease in CL, which correlated with longer gestational age at delivery. Copyright © 2016 Informa UK Limited, trading as Taylor & Francis Group.

**Database:** EMBASE

## **8. Vaginal progesterone combined with cervical pessary: A chance for pregnancies at risk for preterm birth?**

**Author(s):** Stricker N.; Kyvernitakis I.; Goerges J.; Arabin B.; Timmesfeld N.

**Source:** American Journal of Obstetrics and Gynecology; Jun 2016; vol. 214 (no. 6); p. 739

**Publication Date:** Jun 2016

**Publication Type(s):** Journal: Article

**Abstract:** Background Precocious cervical ripening, as defined by cervical shortening on transvaginal sonography, has prompted a broad evaluation of secondary strategies (such as cerclage, vaginal progesterone, or a cervical pessary) to prevent preterm delivery. However, there is still a lack of direct comparisons between individual treatments or their combinations. Objective We sought to compare at-risk patients and screening patients who had been treated with cervical pessary alone with patients who had been treated with pessary plus vaginal progesterone. Study Design This is a pre- and postintervention cohort study from a preterm labor clinic where placement of a cervical pessary has been the standard treatment since 2008 for at-risk women defined by (1) a history of spontaneous preterm birth at <37 weeks of gestation, (2) conization, or (3) a cerclage because of a previous short cervical length of <3rd percentile and, additionally, with a cervical length of <10th percentile in the ongoing pregnancy. Patients who did not meet the criteria for the "at risk" group, but who had a cervical length of <3rd percentile comprised the screening group. From July 2011 onward, vaginal progesterone (200 mg, suppositories) was prescribed in addition to the pessary.

Both at-risk patients (n = 55) and screening patients (n = 51) were treated at the time of diagnosis. The primary outcome was the rate of preterm deliveries at <34 weeks of gestation. Secondary outcomes included deliveries at <28, <32, and <37 weeks of gestation, the days from start of therapy until delivery, a composite index of neonatal outcome, and the number of days in the neonatal intensive care unit. Primary and secondary outcomes were compared between groups with the use of multivariable models to adjust for possible confounders. Results Delivery at <34 weeks of gestation occurred in 17 of 53 patients (32.1%) who were treated with pessary plus progesterone, compared with 13 of 53 patients (24.5%) who were treated with pessary alone (P = .57). Similarly, there was no difference in the rate of preterm delivery at <28, <32, or <37 weeks of gestation. The composite poor neonatal outcome was 15.1% in the pessary group vs 18.9% in the combined group (P = .96). The mean duration of stay in the neonatal intensive care unit was 46.5 days (range, 9-130 days) in the combined vs 52.0 days (range, 3-151 days) in the pessary group (P < .001). Conclusion In this cohort study, treatment of precocious cervical ripening with cervical pessary plus vaginal progesterone did not reduce the rates of preterm delivery at <28, <32, <34, or <37 weeks of gestation compared with pessary alone. The neonatal intensive care use was shorter in patients who received additional vaginal progesterone, although there was no difference in composite poor neonatal outcome. These preliminary results may serve as a pilot for future trials and provide a basis for treatment until larger trials are completed. Copyright © 2015 Elsevier Inc. All rights reserved.

**Database:** EMBASE

### **9. A randomized trial of a cervical pessary to prevent preterm singleton birth**

**Author(s):** Nicolaides K.H.; Syngelaki A.; Poon L.C.; Zamprakou A.; Skyfta E.; Calvo J.R.; Picciarelli G.; Tul N.; Parra-Cordero M.; Palma-Dias R.

**Source:** New England Journal of Medicine; Mar 2016; vol. 374 (no. 11); p. 1044-1052

**Publication Date:** Mar 2016

**Publication Type(s):** Journal: Article

Available in full text at [New England Journal of Medicine](#) - from Massachusetts Medical Society ; Notes: Please select 'Login via Athens or your institution' and enter your OpenAthens username and password.

Available in full text at [New England Journal of Medicine, The](#) - from ProQuest

**Abstract:**BACKGROUND Preterm birth is the leading cause of neonatal and infant death and of disability among survivors. It is unclear whether a pessary inserted around the cervix reduces the risk of preterm singleton birth. METHODS We conducted a multicenter, randomized, controlled trial comparing pessary placement with expectant management (control) in girls and women who were pregnant with singletons (singleton pregnancies) and who had a cervical length of 25 mm or less at 20 weeks 0 days to 24 weeks 6 days of gestation. Participants in either group who had a cervical length of 15 mm or less, at randomization or at subsequent visits, received treatment with vaginal progesterone. The primary outcome was spontaneous delivery before 34 weeks of gestation. RESULTS In an intention-to-treat analysis, there was no significant difference between the pessary group (465 participants) and the control group (467 participants) in the rate of spontaneous delivery before 34 weeks (12.0% and 10.8%, respectively; odds ratio in the pessary group, 1.12; 95% confidence interval, 0.75 to 1.69; P = 0.57). There were no significant differences in the rates of perinatal death (3.2% in the pessary group and 2.4% in the control group, P = 0.42), adverse neonatal outcome (6.7% and 5.7%, respectively; P = 0.55), or neonatal special care (11.6% and 12.9%, respectively; P = 0.59). The incidence of new or increased vaginal discharge was significantly higher in the pessary group than in the control group. CONCLUSIONS Among girls and women with singleton pregnancies who had a short cervix, a cervical pessary did not result in a lower rate of spontaneous early preterm delivery than the rate with expectant management. (Funded by the Fetal

Medicine Foundation; Current Controlled Trials number, ISRCTN01096902.) © Copyright 2016 Massachusetts Medical Society. All rights reserved.

**Database:** EMBASE

### **10. Prophylactic use of the Arabin cervical pessary in fetuses with severe congenital diaphragmatic hernia treated by fetoscopic endoluminal tracheal occlusion (FETO): preliminary experience.**

**Author(s):** Dobrescu, Oana; Cannie, Mieke M; Cordier, Anne-Gael; Rodó, Carlota; Fabietti, Isabella; Benachi, Alexandra; Carreras, Elena; Persico, Nicola; Hurtado, Ivan; Gucciardo, Leonardo; Jani, Jacques C

**Source:** Prenatal diagnosis; Jan 2016; vol. 36 (no. 1); p. 81-87

**Publication Date:** Jan 2016

**Publication Type(s):** Research Support, Non-u.s. Gov't Multicenter Study Journal Article  
Observational Study

Available in full text at [Prenatal Diagnosis](#) - from John Wiley and Sons

**Abstract:**The aim of this study was to describe whether the prophylactic use of a cervical pessary decreases the rate of premature birth in congenital diaphragmatic hernia (CDH) fetuses treated with fetoscopic tracheal occlusion (FETO). The study concerns a consecutive series of cases with CDH and FETO and a group of CDH without FETO. In a subgroup of the FETO group, a prophylactic cervical pessary was inserted the day following the procedure. Gestational age (GA) at birth was the primary outcome. Fifty-nine fetuses with FETO and 47 expectantly managed were included. The last 15 FETO had a cervical pessary inserted. The median GA at delivery in the FETO group with pessary was 35.1 weeks and was not different from that in the FETO group without a pessary (34.3 weeks;  $p = 0.28$ ) but was below that in the expectantly managed group (38.3 weeks;  $p < 0.001$ ). Early results suggest that prophylactic use of an Arabin cervical pessary does not prolong gestation of CDH fetuses treated with FETO. © 2015 John Wiley & Sons, Ltd. © 2015 John Wiley & Sons, Ltd.

**Database:** Medline

### **11. New therapeutic strategies in short cervical length: Arabin pessaries**

**Author(s):** Juliano L.; Guarino T.; Napoli S.A.; Debenedictis F.; Schiattarella M.G.

**Source:** Italian Journal of Gynaecology and Obstetrics; Mar 2015; vol. 27 (no. 1); p. 19-27

**Publication Date:** Mar 2015

**Publication Type(s):** Journal: Article

**Abstract:**The progress made in the field of ultrasound in the diagnosis of threatened preterm delivery in the case of short cervical length (SCL) are unfortunately not paid advances in therapy, since actual treatment options are confined to the use of progesterone, micronized vaginally or orally, of antibiotics and indomethacin, which are also used vaginally or orally, of nifedipine, used orally, until reaching to promising use of lactoferrin or lactoglobulin, vaginally, or to the packaging of a surgical cerclage procedure now almost obsolete in most European countries because of the many complications that occurred. New perspectives seems to offer the application of silicone vaginal devices specifically designed to modify the cervical plasticity and reduce, with very striking mechanism as will be seen, the possibility of occurrence of segmental uterine contractions; for such features to "cervical support" such devices are called pessaries, whose function is mistakenly equated with classic surgical cerclage, invasive method, bloody, costly and much less effective in preventing preterm birth. Our experience is based on the application of 32 vaginal devices in the period October 2012 -May 2014; of these 28 ( $p=87.5\%$ ) were placed in singleton pregnancies and 4

(12.5%) in twin pregnancies (3 bigemine pregnancies 1 and triplets). In 22/32 pregnant women (p=69%) the application of the pessary has been associated with the use of a medicament, as we shall see later in the specification, while in 10/32 (p=31%) was not associated with any medication. Surprisingly, the outcome of these 2 latter groups did not show substantial changes, so as to lead us to believe that the action of vaginal device is the real creator in obtained benefits. Last notation must be made on gestational period of positioning pessary that in the vast majority of cases occurred between 22 and 28 weeks (n=29, p=90%), while in only 3 cases (p=10%) the time of insertion was greater than 28 weeks. Almost all pregnant women had when inserting a BMI > 25 (n=30, p=94%), while only 2 were <25. Copyright © 2014 Partner-Graf srl, Prato.

**Database:** EMBASE

URL: <http://www.italianjog.com/numeri/mar-vol27-n1/juliano-1014660-2385-0868-014.pdf>

## **12. Arabin pessary to prevent spontaneous preterm birth: Experience of a specialist preterm labour clinic**

**Author(s):** Care A.; Sharp A.; Alfirevic Z.

**Source:** Archives of Disease in Childhood: Fetal and Neonatal Edition; Jun 2014; vol. 99

**Publication Date:** Jun 2014

**Publication Type(s):** Journal: Conference Abstract

Available in full text at [Fetal and Neonatal](#) - from Highwire Press

**Abstract:**Background Arabin pessary remains a controversial but potential candidate to prevent sPTB in high risk asymptomatic patients. One large randomised controlled trial has promised hope, demonstrating staggering results that, as yet, have not been replicated. It is cheaper than both cervical cerclage and progesterone, can be fitted in the clinic and reduces concerns regarding patient compliance. Our aim was to analyse our outcomes and experience with all patients treated with Arabin pessary in Liverpool Preterm Labour (PTL) Clinic. Method Data was collected on 38 singleton patients with a history of sPTB (n = 11), PPROM (n = 7) or significant cervical surgery (n = 12) who were identified with a short cervix on TVUSS. Results The median cervical length at insertion was 17mm, with median GA 19wks (IQR 7). Rates of sPTB were 25% (sPTB), 29% (PPROM) and 25% (cervical surgery). Reported side effects were minimal but included increased discharge, discomfort with pessary on insertion and awareness of pessary. One pessary fell out. The median gestation at delivery was 37weeks (IQR 6). Additional or concomitant therapy (progesterone/cerclage) was used in 7 cases, this occurred less frequently with increasing clinician confidence in pessary. Conclusion Arabin pessary is cheap, easy to insert and well tolerated by women but not universally suitable due to one pessary falling out. We currently offer this method as first line for prevention of sPTB in high-risk women as no difference in PTB rates as been found when compared to previous use of progesterone. Further evidence is required to compare effectiveness against other treatments.

**Database:** EMBASE



### **13. Modification of cervical length after cervical pessary insertion and its correlation with weeks of gestation**

**Author(s):** Rodo C.; Mendoza M.; Gascon A.; Pratcorona L.; Merced C.; Goya M.; Carreras E.

**Source:** Journal of Maternal-Fetal and Neonatal Medicine; Jun 2014; vol. 27 ; p. 376

**Publication Date:** Jun 2014

**Publication Type(s):** Journal: Conference Abstract

Available in full text at [Journal of Maternal-Fetal and Neonatal Medicine, The](#) - from Taylor & Francis

**Abstract:** Brief Introduction: The aim of this study was to observe the modifications of the cervical length (CL) after insertion of a cervical pessary (Arabin ASQ 65/25/32) in patients obtained from the PECEP Trial and also measure the correlation of this modification with the weeks of gestation (WG) at birth, compared with the expectant management group. Materials & Methods: Randomised prospective study of 380 asymptomatic risk-free singleton pregnancies between weeks 20 + 0 and 23 + 6. CL in all patients was short (525 mm) and they were randomised into two groups: expectant management and cervical pessary. Cervical length was measured in all patients after pessary insertion and before 24 + 0 WG. Clinical Cases or Summary Results: The study included 380 pregnant women: 190 underwent periodic controls of CL (expectant management) and 190 were fitted with a pessary. Mean CL in both groups at the time of randomisation showed no statistically-significant differences (pessary group: 19.02 mm and management group: 19.00 mm;  $p = 0.966$ ). Mean CL measured after randomisation and before 24 + 0 WG was 15.44 mm in patients of the expectant management group and 21.56 mm in the pessary group. These differences were statistically significant ( $p = 0.000$ ). When means at randomisation and at the second measurement were compared, LC had decreased by 3.58 mm in the expected management group and increased by 2.56 mm in the pessary group; this difference was statistically significant ( $p = 0.000$ ). Coefficients of correlation showed that in patients with the same CL at 20 WG in both groups, those with a pessary gave birth later. In the expectant management group, a correlation was found between the size of the decrease in CL between 20 WG and later measurement and WG at delivery. However, an increase in CL after pessary insertion did not correlate with an increase in WG at birth. Conclusions: Insertion of an Arabin cervical pessary increased CL in asymptomatic patients with a short cervix. Asymptomatic patients with a short cervix at week 20 who received expectant management presented a decrease in CL as WG increased, which correlated with shorter WG at birth. The cervical pessary stabilises the progressive decrease in CL, which correlated with longer WG at birth. The increase in CL after cervical pessary insertion did not correlate with an increase in WG at birth.

**Database:** EMBASE

**14. Arabin-pessary in treatment of cervical insufficiency to prevent preterm birth-a prospective, monocentric, non-randomized study**

**Author(s):** Ruehl I.M.; Andrulat A.; Brugger S.; Fleming M.; Moser K.B.; Noll K.M.; Von Obernitz N.

**Source:** Journal of Maternal-Fetal and Neonatal Medicine; Jun 2014; vol. 27 ; p. 372

**Publication Date:** Jun 2014

**Publication Type(s):** Journal: Conference Abstract

Available in full text at [Journal of Maternal-Fetal and Neonatal Medicine, The](#) - from Taylor & Francis

**Abstract:**Brief Introduction: Premature birth is a central topic in obstetric care and persists to be the main cause for neonatal mortality and morbidity. Mechanical prevention by cervical cerclage is an invasive procedure and failed to show superiority in comparison to other interventions. Arabin-pessaries have been used more frequently again due to recent studies. Aim of this study was to re-introduce Arabin-pessaries in our clinical routine and observe prolongation of pregnancy. Materials & Methods: More than 100 patients have been treated with an Arabin-pessary due to cervical insufficiency (525mm) between 09/2012 and 03/2014 in our department. Relevant parameters (e.g. prolongation, hospital stay, gestational age at delivery) were observed. The study is ongoing. Clinical Cases or Summary Results: Results: Preliminary data showed a median hospital stay of 8 days (1-18 days), median gestational week of application was 30 + 1 (ranging from 22 + 5 to 32 + 6), with a median cervical length of 19mm. Median prolongation of pregnancy was 45 days, ranging from 13 to 101 days, median gestational age of removal was 37 + 0 (33 + 6-38 + 4), median gestational age of delivery was 38 + 2 (30 + 1-41 + 1). One patient was delivered due to placental abruption in 30 + 1. Conclusions: Application of the Arabin-pessary is an effective method to treat cervical insufficiency.

**Database:** EMBASE

**15. Recent advances in the prevention and treatment of preterm labour: Oxytocin antagonists and the silicone (Arabin) pessary**

**Author(s):** Kay O.; Hughes A.; Thornton S.; Saade G.; Bennett P.; Terzidou V.

**Source:** Fetal and Maternal Medicine Review; May 2014; vol. 25 (no. 2); p. 134-145

**Publication Date:** May 2014

**Publication Type(s):** Journal: Review

Available in full text at [Fetal and Maternal Medicine Review](#) - from ProQuest

**Abstract:**Preterm birth may be spontaneous or medically indicated for maternal or fetal reasons. Around 20-25% of preterm births (PTB) follow preterm premature rupture of the membranes (PPROM), however the cause of preterm labour is often unknown. It may represent early maturation and activation of the normal labour process or it may be precipitated by pathological causes. The normal process of labour has a diurnal variation with more deliveries occurring at night. Evidence demonstrating that the diurnal variation persists in preterm deliveries suggest that at least a proportion are due to early maturation of the normal process and the logical assumption is that these may be amenable to prevention or effective treatment. Whatever the cause of preterm delivery, there appears to be a common pathway resulting in activation of inflammatory processes. It is important to distinguish the physiological and pathological causes of preterm labour and not to assume that all inflammation is pathological. The distinction is clinically important since pathological causes may be associated with an adverse intrauterine environment, which would be a contraindication to delaying delivery. Copyright © 2015 Cambridge University Press.

**Database:** EMBASE

## 16. Efficacy of arabin cervical pessary to prevent preterm birth in twin pregnancies

**Author(s):** Di Tommaso M.; Seravalli V.; Sisti G.; Vellucci F.L.; Arduino S.; Bossotti C.; Todros T.

**Source:** Reproductive Sciences; Mar 2014; vol. 21 (no. 3)

**Publication Date:** Mar 2014

**Publication Type(s):** Journal: Conference Abstract

**Abstract:**INTRODUCTION: Preterm birth (PTB) is a major cause of perinatal morbidity and mortality and its incidence is higher in twin pregnancies. So far no treatment has been proved to be effective in preventing PTB in these pregnancies. Our aim was to evaluate whether Arabin cervical pessary prevents preterm delivery in twin pregnancies with short cervical length. METHODS: This is a retrospective cohort study on 91 women with twin pregnancy and cervical length < 30 mm between 18 and 32 gestational weeks. 30 patients who received Arabin cervical pessary were compared with 61 patients who underwent expectant management at hospital admission. Primary outcomes were gestational age at delivery, PTB before 37, 34 and 28 weeks. Secondary outcomes were use of Atosiban and time interval between detection of short cervix and delivery. Normality of variables distribution was tested using Shapiro-Wilk test. Normally distributed continuous variables were compared using Student's t-test, while not normally distributed variables were compared using Mann-Whitney U Test. Categorical variables were compared using Chi-Square ( $\chi^2$ ) test. RESULTS: Of 91 twin pregnancies 30 women received an Arabin cervical pessary and 61 received no treatment. The two groups had similar age and incidence of prior PTB. Gestational age at hospital admission was significantly lower in the pessary group (25 vs 28 weeks,  $p = 0.004$ ). The group with pessary delivered at a higher gestational age compared with controls (35 vs 33 weeks,  $p = 0.008$ ). The incidence of delivery < 28 weeks was significantly lower in the group with pessary ( $p = 0.04$ ), while no difference was found in the rate of deliveries < 34 weeks. There was a trend towards a reduction rate of delivery before 37 weeks in the pessary group, even it did not reach the statistical significance ( $p = 0.09$ ). The use of Atosiban and incidence of PROM and chorioamnionitis was not significantly different between groups. Time interval between detection of short cervix and delivery was longer in the pessary group ( $p < 0.001$ ). CONCLUSIONS: Arabin cervical pessary seems to increase the gestational age at delivery in twin pregnancies with short cervix and to reduce the incidence of delivery < 28 weeks, but not < 34 or 37 weeks.

**Database:** EMBASE

## 17. Cervical pessaries for prevention of preterm birth in women with a multiple pregnancy (ProTWIN): A multicentre, open-label randomised controlled trial

**Author(s):** Liem S.; Schuit E.; Hegeman M.; Bais J.; De Boer K.; Bloemenkamp K.; Brons J.; Duvekot H.; Bijvank B.N.; Franssen M.; Gaugler I.; De Graaf I.; Oudijk M.; Papatsonis D.; Pernet P.; Porath M.; Scheepers L.; Sikkema M.; Sporken J.; Visser H.; Van Wijngaarden W.; Woiski M.; Van Pampus M.; Willem Mol B.; Bekedam D.

**Source:** Obstetrical and Gynecological Survey; Feb 2014; vol. 69 (no. 2); p. 73-75

**Publication Date:** Feb 2014

**Publication Type(s):** Journal: Note

Available in full text at [Obstetrical & gynecological survey](#). - from Ovid

**Abstract:**Women with multiple gestations often deliver at less than 37 weeks, increasing the risks of perinatal morbidity and mortality. Treatment with a pessary might prevent preterm birth by changing the inclination of the cervical canal and preventing premature dilatation of the cervix, rupture of the membranes, and deterioration or loss of the cervical mucous plug. This multicenter, open-label, randomized controlled trial at 40 hospitals was performed to determine whether a cervical pessary could prevent poor perinatal outcomes in parturients with a multiple pregnancy. At

12 to 20 weeks' gestation, patients were assigned to the pessary or control group; cervical length was measured at 16 to 22 weeks. Women in the study group received an Arabin pessary at 16 to 20 weeks, which was removed in week 36 or in case of preterm premature rupture of the membranes, active vaginal bleeding, other signs of preterm labor, or patient discomfort. Obstetric care was otherwise similar in the 2 groups. The primary outcome was a composite of poor perinatal outcomes, including stillbirth, preventricular leukomalacia, severe respiratory distress syndrome, bronchopulmonary dysplasia, intraventricular hemorrhage, necrotizing enterocolitis, sepsis, and neonatal death within 6 weeks after the anticipated term date. Secondary outcomes were time to delivery, preterm birth at less than 32 and less than 37 weeks, days in the neonatal intensive care unit, days of maternal admission for preterm labor, and maternal morbidity. A total of 401 of 403 women in the pessary group and 407 of 410 in the control group completed the study. Five women in the pessary group had a surgical cerclage; 1 patient died, and the others delivered at 21.6 to 36.7 weeks, with 3 having poor perinatal outcomes. No patients in the control group had a cerclage. Vaginal discharge occurred in 104 women (26%) in the pessary group and in none of the controls. The pessary was removed from 57 women (14%) at less than 28 weeks and from 22 women (5%) at 28 to 32 weeks; 7 and 13, respectively, delivered within 48 hours of removal. At 32 to 36 weeks, the pessary was removed from 107 women; 70 delivered within 48 hours. The most common reasons for pessary removal in these women were preterm premature rupture of the membranes, vaginal bleeding, contractions, and induction of labor. The composite poor perinatal outcome occurred in 53 women (13%) and 55 women (14%) in the pessary and control groups, respectively (relative risk (RR), 0.98; 95% confidence interval, 0.69-1.39). Ten stillbirths (2%) occurred in each group. The other conditions within the composite outcome did not differ between the 2 groups. In the pessary and control groups, 16 and 18 infants, respectively, died before discharge. The groups were similar in median gestational age at delivery; frequencies of delivery at less than 28, less than 32, and less than 37 weeks; and frequency and length of neonatal intensive care unit admission. In the women with a cervical length of less than 25th percentile (<38 mm), the pessary significantly reduced the frequency of poor perinatal outcomes and very preterm delivery. A cervical pessary does not necessarily prevent poor perinatal outcomes or preterm birth in all women with a multiple gestation. Although the pessary had a positive effect in women with a twin pregnancy and a short cervix, these results should be confirmed in additional prospective studies. The safety and low cost of the pessary should be considered when counseling a parturient with a multiple pregnancy and short cervix. © 2014 by Lippincott Williams & Wilkins.

**Database:** EMBASE

## **18. Cervical pessaries for prevention of spontaneous preterm birth: past, present and future**

**Author(s):** Arabin B.; Alfirevic Z.

**Source:** Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology; Oct 2013; vol. 42 (no. 4); p. 390-399

**Publication Date:** Oct 2013

**Publication Type(s):** Journal: Review

**Abstract:** This Review describes the rationale for the use of cervical pessaries to prevent spontaneous preterm birth and their gradual introduction into clinical practice, discusses technical aspects of the more commonly used designs and provides guidance for their use and future evaluation. Possible advantages of cervical pessaries include the easy, 'one-off' application, good side-effect profile, good patient tolerance and relatively low cost compared with current alternatives. Use of transvaginal sonography to assess cervical length in the second trimester allows much better selection of patients who may benefit from the use of a cervical pessary, but future clinical trials are needed to establish clearly the role of pessaries as a preterm birth prevention

strategy worldwide. Copyright © 2013 The Authors. Ultrasound in Obstetrics & Gynecology published by John Wiley & Sons Ltd on behalf of the International Society of Ultrasound in Obstetrics and Gynecology.

**Database:** EMBASE

**19. Arabin cervical pessary in women at high risk of preterm birth: a magnetic resonance imaging observational follow-up study.**

**Author(s):** Cannie MM; Dobrescu O; Gucciardo L; Strizek B; Ziane S; Sakkas E; Schoonjans F; Divano L; Jani JC

**Source:** Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology; Oct 2013; vol. 42 (no. 4); p. 426-433

**Publication Date:** Oct 2013

**Publication Type(s):** Journal Article; Observational Study; Research Support, Non-U.S. Gov't

**PubMedID:** 23671013

Available in full text at [Ultrasound in Obstetrics and Gynecology](#) - from Wiley-Blackwell Free Backfiles NHS

Available in full text at [Ultrasound in Obstetrics and Gynecology](#) - from John Wiley and Sons

**Abstract:**OBJECTIVE: To help elucidate the mechanism of action of the Arabin cervical pessary in pregnancies at high risk for preterm delivery.METHODS: Cervical length and uterocervical angle were evaluated in relation to gestational age in 198 pregnancies not at high risk for preterm birth that underwent clinical fetal magnetic resonance imaging (MRI). Additionally, in 73 singleton pregnancies at high risk for preterm birth, an Arabin cervical pessary was placed at 14-33 weeks' gestation. We performed MRI of the cervix immediately before and after placement and at monthly follow-up until removal of the pessary. In a subgroup of 54 pregnancies with a short cervix and pessary placement at 17-31 weeks' gestation, the uterocervical angle and cervical length at follow-up were compared with the preplacement values.RESULTS: In pregnancies not at high risk for preterm birth, the uterocervical angle did not vary, but cervical length showed a significant decrease with gestational age ( $r = -0.15$ ,  $P = 0.05$ ).CONCLUSION: In patients at high risk for preterm delivery, correct placement of the Arabin cervical pessary should be checked immediately; this can be performed quickly and easily using MRI. This study provides some evidence that, in singleton pregnancies with a short cervix, a cervical pessary delays birth through a mechanical effect on the uterocervical angle.

**Database:** PubMed

## **20. Prevention of prematurity in twins with arabin cerclage pessary**

**Author(s):** Gliozheni O.; Dallaku K.; Kati K.

**Source:** Journal of Perinatal Medicine; Jun 2013; vol. 41

**Publication Date:** Jun 2013

**Publication Type(s):** Journal: Conference Abstract

**Abstract:**Objective: the purpose of this study was to evaluate the effectiveness of Arabin cerclage pessary in twin pregnancies. Background: Although advances in recent years, prematurity in twins and its complications especially in severe prematurity remains a problem in modern obstetrics. Evidences from randomized studies have shown that bed rest, classic cerclage, tocolytics and progesterone do not improve the prematurity rate in twins. Methods: In this cohort randomized study were included 112 twin pregnancies in the period Feb. 2010 - Sept. 2012. The patients were divided randomly in two groups: 56 in the group of Arabin cerclage pessary and 56 in the group of expectant management. The randomization was done at 20 to 25 weeks of gestation, regardless of parity, chorionicity, or cervical length. We excluded cases with uterine malformations, placenta praevia, fetal abnormalities, twin-to-twin transfusion, painful regular uterine contractions, ruptured membranes, severe fetal growth restriction or death of one of the fetuses. The outcomes measured were: gestational age at delivery, fetal birth-weight, Apgar at 5-10 minutes, day-stay at NICU, RDS morbidity, early neonatal outcome, and maternal complications. A questionnaire evaluation within the treatment group was performed for every patient, scoring complaints of descensus, discharge, pain at insertion or removal and whether patients would chose this treatment again. Results: Among the outcomes analyzed at the group of twins with pessary cerclage compared with the group of twins without pessary, we found a significant difference ( $<0.05$ ) at the pessary group concerning: longer gestational age at delivery, larger fetal birthweight, shorter day-stay at NICU, better neonatal outcome, reduced admission days for preterm labor and no major maternal complications attributable to the pessary. In general, all patients treated and delivered at our hospital had a positive opinion of the treatment. Conclusion: Insertion of a vaginal pessary in twin pregnancies is a simple, non - invasive technique and may be a cost -effective preventive treatment for SPB in twins. Pessaries may be useful in women at risk for preterm delivery and seem to be without significant risks. Other prospective, randomized studies are needed in the future to address these issues.

**Database:** EMBASE

## **21. Cervical pessary for short cervical length in the mid-trimester**

**Author(s):** Daskalakis G.; Zaharakis D.; Papantoniou N.; Domali E.; Theodora M.; Mesogitis S.; Antsaklis A.

**Source:** Journal of Perinatal Medicine; Jun 2013; vol. 41

**Publication Date:** Jun 2013

**Publication Type(s):** Journal: Conference Abstract

**Abstract:**Aim: To identify the outcome of pregnancies with a short cervical length in the second trimester, following an Arabin pessary placement. Methods: Prospective randomized study. All cases with a short cervix ( $<25$  mm) were eligible to participate in the study. The gestational age should be between 18 and 25 weeks. The cervical length was measured with a transvaginal ultrasound scan usually in the same time of the second trimester anomaly scan. All women were re-evaluated by the same operator (D. Z.) in order to confirm the eligibility criteria. The group A consisted of women with a short cervix who were randomized to cervical pessary, while the group B consisted of women with a short cervix who had bi-weekly ultrasonographic cervical assessment. All women received 200 mg transvaginal progesterone capsules from the time of randomization until the 34 completed weeks. Exclusion criteria were the presence of ruptured membranes, a fetal growth restriction or fetal

congenital anomalies. The pessary was removed at 37 weeks or earlier in cases of onset of labor, premature rupture of membranes, vaginal bleeding or medically indicated labor induction or elective cesarean section. Results: The group A consisted of 52 singleton and 8 twin pregnancies, while the group B of 46 singleton and 7 twin pregnancies. The gestational age at randomization was 24+1 weeks and 23+2 weeks for group A and B respectively, while the median cervical length for group A was 13.88 mm and for group B was 15.1 mm. For singleton pregnancies in the group A, the preterm delivery rate before 37 weeks was 25% and before 34 weeks was 5.7%, while in the group B the corresponding numbers were 32.6% and 13%. For twins the preterm delivery rate before 37 and 34 weeks was 75%, 12.5% and 71.4%, 28.6% for group A and B respectively. The mean birth weight and the rate of NICU admission was 2420 g and 23.3% for group A and 2180 g and 30.2% for group B. Conclusion: The rate of preterm delivery was lower in the pessary group. This suggests that the pessary may have a value as a treatment for women with a mid-trimester short cervix.

**Database:** EMBASE

## **22. Arabin cerclage pessary in the management of cervical insufficiency**

**Author(s):** Ting Y.H.; Lao T.T.; Wa Law L.; Hui S.Y.A.; Chor C.M.; Yeung Leung T.; Lau T.K.

**Source:** Journal of Maternal-Fetal and Neonatal Medicine; Dec 2012; vol. 25 (no. 12); p. 2693-2695

**Publication Date:** Dec 2012

**Publication Type(s):** Journal: Review

Available in full text at [Journal of Maternal-Fetal and Neonatal Medicine, The](#) - from Taylor & Francis

**Abstract:** Objective: To evaluate the use of Arabin cerclage pessary in the management of cervical insufficiency. Methods: The pregnancy outcome of 20 women carrying singleton pregnancy referred for suspected cervical insufficiency and chose Arabin cerclage pessary for treatment from 2009-2011 were reviewed. Pregnancy outcome were analysed according to presence of risk factors, amniotic fluid sludge, cervical length and gestation at pessary insertion. Results: At presentation, mean cervical length was 1.17-cm (range 0-2.33-cm), mean gestation at pessary insertion and delivery was 20.6 (12.9-26.1) weeks and 32.1 (14.7-40.1) weeks, respectively, and mean prolongation of pregnancy was 11.5 (0.5-25.2) weeks. Overall, 5 (25%) had fetal loss between 14.7-23.1 weeks, while 3 (15%) and 12 (60%) delivered before and after 34 weeks gestation, respectively with no perinatal mortality. Compared with women with cervical length 1.5-cm had pregnancy prolonged for >49 days (100 vs. 54% p = 0.032) and 86% delivered beyond 34 weeks (86 vs. 46% p = 0.085). Conclusions: Arabin cerclage pessary appears to be optimal for treating women at high risk of cervical insufficiency with a cervical length of 1.5-2.5-cm, while it is an acceptable option for high risk women with cervical length <1.5-cm. © 2012 Informa UK, Ltd.

**Database:** EMBASE

### **23. Pessary-treatment in pregnancy because of cervical shortening after conisation**

**Author(s):** Kyvernitakis I.; Onugoren O.; Arabin B.

**Source:** Archives of Gynecology and Obstetrics; Oct 2012; vol. 286 (no. 1)

**Publication Date:** Oct 2012

**Publication Type(s):** Journal: Conference Abstract

Available in full text at [Archives of Gynecology and Obstetrics](#) - from Springer Link Journals

**Abstract:** Objectives: Cervical shortening is a condition that can lead to preterm birth. The invasive nature of a conisation may destroy the anatomical structure of the cervix and support the risks of premature birth. Methods: All pregnant women admitted in our department between 2010 and 2011 with cervical shortening due to at least one conisation were included in the study. We analyzed the cases treated with either an abdominal cerclage (n = 1) or an Arabin Cerclage-Pessary (n = 10) and evaluated the mean prolongation of pregnancy, the neonatal outcome as well as the total days of admission. Results: Among the study group treated with a pessary (30.3 years, range 26-37 years) the mean gestational age by insertion was 13 + 4 (10 + 5 - 20 + 3) weeks and the mean CL was 21.39 mm (6-36 mm). Three subjects presented with funneling at insertion with a mean proportion of funneling width of 21.6 mm (10-38 mm) and funneling length of 29 mm (20-37 mm). The mean gestational age at delivery was 37 + 6 (33 + 0-41 + 0) weeks and the mean interval between insertion and delivery was 180.5 (84-219) days or 24 + 2 weeks. 4 Patients were treated additionally with progesterone and one with indomethacin. The cesarean rate in the study population was 25 % and no neonatal complications have been reported. The mean duration of hospital stay was 10.87 (2-28) days. One patient who received an abdominal cerclage at 14 weeks due to a completely effaced cervix at 14 weeks went on to 34 weeks when a cesarean delivery had to be performed due to preeclampsia. Discussion: Recently, the study group of Goya, Carreras and Calbero investigated in an RCT the impact of a pessary treatment in singleton pregnancies with cervical shortening and found a significant success of pessary treatment in preventing early preterm birth. We suggest a cerclage pessary may also be a cost-effective treatment for women with conisation prior to pregnancy when applied during the first trimester to reduce the risk of premature delivery and/or abortion. Also for this group prospective controlled trials are needed. We shall try to collect matched controlled cases to support our hypothesis that pessaries are a non- invasive effective solution in preventing early birth in this risk group.

**Database:** EMBASE

### **24. Cervical pessary in pregnant women with a short cervix (PECEP): an open-label randomised controlled trial.**

**Author(s):** Goya, Maria; Pratcorona, Laia; Merced, Carme; Rodó, Carlota; Valle, Leonor; Romero, Azahar; Juan, Miquel; Rodríguez, Alberto; Muñoz, Begoña; Santacruz, Belén; Bello-Muñoz, Juan Carlos; Llurba, Elisa; Higuera, Teresa; Cabero, Luis; Carreras, Elena; Pesario Cervical para Evitar Prematuridad (PECEP) Trial Group

**Source:** Lancet (London, England); May 2012; vol. 379 (no. 9828); p. 1800-1806

**Publication Date:** May 2012

**Publication Type(s):** Research Support, Non-u.s. Gov't Randomized Controlled Trial Multicenter Study Journal Article

Available in full text at [Lancet, The](#) - from ProQuest

**Abstract:** Most previous studies of the use of cervical pessaries were either retrospective or case controlled and their results showed that this intervention might be a preventive strategy for women at risk of preterm birth; no randomised controlled trials have been undertaken. We therefore



undertook a randomised, controlled trial to investigate whether the insertion of a cervical pessary in women with a short cervix identified by use of routine transvaginal scanning at 20-23 weeks of gestation reduces the rate of early preterm delivery. The Pesarío Cervical para Evitar Prematuridad (PECEP) trial was undertaken in five hospitals in Spain. Pregnant women (aged 18-43 years) with a cervical length of 25 mm or less were randomly assigned according to a computer-generated allocation sequence by use of central telephone in a 1:1 ratio to the cervical pessary or expectant management (without a cervical pessary) group. Because of the nature of the intervention, this study was not masked. The primary outcome was spontaneous delivery before 34 weeks of gestation. Analysis was by intention to treat. This study is registered with ClinicalTrials.gov, number NCT00706264. 385 pregnant women with a short cervix were assigned to the pessary (n=192) and expectant management groups (n=193), and 190 were analysed in each group. Spontaneous delivery before 34 weeks of gestation was significantly less frequent in the pessary group than in the expectant management group (12 [6%] vs 51 [27%], odds ratio 0.18, 95% CI 0.08-0.37; p<0.0001). No serious adverse effects associated with the use of a cervical pessary were reported. Cervical pessary use could prevent preterm birth in a population of appropriately selected at-risk women previously screened for cervical length assessment at the midtrimester scan. Instituto Carlos III. Copyright © 2012 Elsevier Ltd. All rights reserved.

**Database:** Medline

## **25. Prevention of prematurity in twins with arabin cerclage pessary**

**Author(s):** Gliozheni O.; Dallaku K.; Ndoni E.; Kallfa E.; Kati K.

**Source:** Twin Research and Human Genetics; Apr 2012; vol. 15 (no. 2); p. 197

**Publication Date:** Apr 2012

**Publication Type(s):** Journal: Conference Abstract

**Abstract:**Objective: Evaluation of the effectiveness of Arabin cerclage pessary in twin pregnancies. Background: Although advances in recent years, prematurity in twins and its complications especially in severe prematurity, remains a problem still today. Evidences from randomized trials have shown that bed rest, tocolysis and progesterone do not improve the prematurity rate in twins. Methods: In this study were included 69 twin pregnancies as below. For every three twin pregnancies we selected randomly one with pessary placement and two without. All patients, with or without pessary, were selected at the same gestational age interval (20-27 weeks), regardless of parity, chorionicity, or cervical length. We excluded patients with uterine malformations, placenta praevia, fetal anomalies, twin-to-twin transfusion or ruptured membranes. Both groups have received treatment with tocolytics, progesterone or bed rest, excluding the cervical cerclage suture. The outcomes measured were: gestational age at delivery, fetal birth-weight, Apgar at 5-10 min, day-stay at NICU, RDS morbidity and early neonatal outcome. Results: We analyzed 23 cases of twins with pessary cerclage, compared with 46 cases of twins without pessaries. We found a longer gestational age at delivery, in the pessary group, a higher fetal birth-weight, a shorter day stay at NCIU and a better neonatal outcome. The difference was significant (p < 0.05). Conclusion: Arabin cerclage pessary can be a useful method for prevention of prematurity in twins. Other trials are needed in the future to confirm these results.

**Database:** EMBASE

## **26. Treatment of cervical incompetence with Arabin-pessary in twin pregnancies**

**Author(s):** Bahlmann F.; Spahn S.; Hungbaur S.; Linder M.

**Source:** Archives of Gynecology and Obstetrics; Oct 2010; vol. 282

**Publication Date:** Oct 2010

**Publication Type(s):** Journal: Conference Abstract

Available in full text at [Archives of Gynecology and Obstetrics](#) - from Springer Link Journals

**Abstract:**Objective: Cervical shortening are associated with more early preterm birth events and a higher neonatal morbidity especially in twin gestations. Our purpose was to evaluate the impact of Arabin-pessary placement in twin pregnancies complicated by a shortened cervical length and funneling. Materials and methods: 62 twin pregnancies were investigated with transvaginal cervical sonography between 19 und 32 weeks of gestation. The Arabin-Pessary will be placed in case of cervical length below 2.5 mm and signs of funneling. Prophylactic antenatal corticosteroid therapy, prophylactic tocolysis and antibiotic therapy in case of bacterial vaginosis were given initially. In case of negative infection parameters (leukocytes <12.000 und CRP <10 mg/l) we started the therapy. Fetal fibronectin was also estimated before application of the pessary. The pessary was removed at 34 weeks of gestation. Results: In 3 cases (two with sludge, one with irresistible contractions) preterm delivery occurred below 30 weeks of gestation. In the other cases the time of delivery was 36 weeks of gestation. Comparison of the patients by chorionicity (monochorionic vs. dichorionic), fetal fibronectin (negative vs. positive) and by bacterial vaginosis (absence vs. presence) did not reveal any significant differences at the gestational age at delivery. The acceptance of the pessary by the patients was excellent. Increased vaginal fluor was an adverse effect but an physiologic and reactive phenomenon with no further necessity of intervention. Conclusions: Treatment of cervical incompetence with an Arabin- Pessary in twin pregnancy is a simple, effective and safe method to prevent preterm birth.

**Database:** EMBASE

## **27. The Arabin pessary for the treatment of threatened mid-trimester miscarriage or premature labour and miscarriage: A case series**

**Author(s):** Sieroszewski P.; Perenc M.; Banach R.; Jasiski A.; Oszukowski P.

**Source:** Journal of Maternal-Fetal and Neonatal Medicine; 2009; vol. 22 (no. 6); p. 469-472

**Publication Date:** 2009

**Publication Type(s):** Journal: Article

Available in full text at [Journal of Maternal-Fetal and Neonatal Medicine, The](#) - from Taylor & Francis

**Abstract:**Objective. The Arabin pessary may be beneficial in the treatment of cervical incompetence. The aim of the study was to analyse the efficacy of the treatment method of pregnant women with cervical incompetence. Methods. A non-randomised study performed in the obstetrical wards in Lodz, Poland utilising 54 pregnant women with cervical incompetence was developed to assess the efficiency of treatment methods of cervically incompetent women. These women were diagnosed by vaginal ultrasound examination during the course of the study. Patients with a cervical length of 1530 mm before 28 weeks an Arabin cervical pessary were inserted, women whose cervical length was less than 15 mm were treated with cervical cerclage. The main end points of the study were preterm or term delivery. Results. In the Arabin pessary group, 1.9% of women delivered before the 29th week of gestation and 83.3% of women delivered after 37 weeks of pregnancy. Eighty-seven per cent of pregnant women treated for cervical incompetence by Arabin pessary delivered by normal spontaneous labour, 1.9% delivered by forceps labour and 11.1% of patients by caesarean section. Among pregnant women treated by Arabin pessary, 3.7% of newborns were estimated as

having a score of 0-4 on the Apgar scale, 13% a score of 5-7 and 83.3% a score of 810. Conclusions. Cervical incompetence treatment effectively prolongs the duration of gestation. Application of the Arabin pessary is an effective method of cervical incompetence treatment. © 2009 Informa UK Ltd.

**Database:** EMBASE

## **28. Noninvasive cerclage for the management of cervical incompetence: A prospective study**

**Author(s):** Acharya G.; Eschler B.; Gronberg M.; Hentemann M.; Ottersen T.; Maltau J.M.

**Source:** Archives of Gynecology and Obstetrics; Feb 2006; vol. 273 (no. 5); p. 283-287

**Publication Date:** Feb 2006

**Publication Type(s):** Journal: Article

Available in full text at [Archives of Gynecology and Obstetrics](#) - from Springer Link Journals

**Abstract:**Objective: The aim of this study was to evaluate the efficacy and safety of a noninvasive cerclage pessary in the management of cervical incompetence. Methods: This is a prospective cohort study of all pregnant women treated for cervical incompetence during a 4-year period. Women with known risk factors for preterm delivery had transvaginal ultrasonography every 2-3 weeks after 17-19 weeks of gestation. Those with progressive shortening of cervix diagnosed before 30 weeks were treated with a cerclage pessary when the cervical length was < 25 mm. The pessary was electively removed at 34-36 weeks. The course and outcome of pregnancy were recorded. Results: Thirty-two women were treated with a cerclage pessary. There were nine twin and two triplet pregnancies. Fifteen (47%) had two or more risk factors for preterm delivery. The mean gestational age at cerclage was 23 (17-29) weeks, cervical length 17 (5-25) mm. Two women required delivery before the onset of labor due to severe intrauterine growth restriction and one due to HELLP syndrome. These were excluded from further analysis. In the remaining 29 women, the interval between cerclage and delivery was 10.4 (2-19) weeks, mean gestational age at delivery 34 (22-42) weeks, and birth weight 2,255 (410-4,045) g. Thirteen (45%) women delivered before 34 weeks. There were a total of 35 live-born infants and four intrapartum fetal deaths (all between 22 and 25 weeks gestation). All women complained of increased vaginal discharge, but no other significant complications were observed that could be attributed to the use of pessary. Conclusion: Cerclage pessary may be useful in the management of cervical incompetence. Whether it can be a noninvasive alternative to surgical cerclage merits further investigation. © Springer-Verlag 2005.

**Database:** EMBASE

**DISCLAIMER:** Results of database and or Internet searches are subject to the limitations of both the database(s) searched, and by your search request. It is the responsibility of the requestor to determine the accuracy, validity and interpretation of the results.

## Strategy 129573

#	Database	Search term	Results
1	Medline	(arabin ADJ3 pessar*).ti,ab	19
2	EMBASE	(arabin ADJ3 pessar*).ti,ab	40
3	EMBASE	exp "PREMATURE FETUS MEMBRANE RUPTURE"/	7953
4	EMBASE	(2 AND 3)	4
5	EMBASE	(infect*).ti,ab	1782119
6	EMBASE	exp INFECTION/	3067504
7	EMBASE	(5 OR 6)	3478245
8	EMBASE	(2 AND 7)	6
9	EMBASE	exp CHORIOAMNIONITIS/	7315
10	EMBASE	(2 AND 9)	1
12	EMBASE	exp "VAGINA PESSARY"/	2277
13	EMBASE	(arabin*).au	194
14	EMBASE	(12 AND 13)	11
15	EMBASE	(3 AND 7 AND 12)	7
16	EMBASE	exp "PREMATURE LABOR"/	41435
17	EMBASE	(7 AND 12 AND 16)	49
18	EMBASE	(silicone ADJ2 pessar*).ti	3
19	Medline	(silicone ADJ2 pessar*).ti	1
20	PubMed	(arabin ADJ3 pessar*).ti,ab	8