

# Excerpts From the World Literature: Obstetrics



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**Pacagnella RC, Silva TV, Cecatti JG, et al. Pessary plus progesterone to prevent preterm birth in women with short cervixes: a randomized controlled trial. *Obstet Gynecol* 2022;139:41–51.**

*Summary:* This was multicentre, intention-to-treat, randomized controlled trial conducted across 17 perinatal centres. In the trial, asymptomatic women with singleton or twin pregnancies and cervical lengths measuring  $\leq 30$  mm between 18 and 22<sup>6</sup> weeks gestation were randomly assigned to either cervical pessary plus vaginal progesterone (pessary-plus-progesterone group) or vaginal progesterone only (200 mg/d; progesterone-only group).

The primary outcome was a composite of neonatal mortality and morbidity. Secondary outcomes were delivery before 37 weeks and before 34 weeks of gestation. Analysis was performed according to intention to treat. A total of 475 women were assigned to pessary plus vaginal progesterone and 461 to progesterone only. There was no difference in the composite perinatal outcome, which occurred in 19.2% (89 of 463) of the women in the pessary-plus-progesterone group and 20.9% (91 of 436) of the women in the progesterone-only group (adjusted risk ratio [RR] 0.88; 95% confidence interval [CI] 0.69–1.12). In addition, there was no difference in the birth rates before 37 or 34 weeks gestation. Women in the pessary group experienced more vaginal discharge (51.6% [245 of 476] vs. 25.4% [117 of 479];  $P < 0.001$ ), pain (33.1% [157 of 476] vs. 24.1% [111 of 479];  $P = 0.002$ ), and vaginal bleeding (9.7% [46 of 476] vs. 4.8% [22 of 479];  $P = 0.004$ ).

The investigators concluded that, in asymptomatic women with short cervixes, the combination of pessary and progesterone did not decrease rates of neonatal morbidity or mortality when compared with progesterone only.

*Comment:* Unfortunately, this is another study showing that the pessary does not seem to be useful in preventing preterm birth in patients at risk. A faint hope caveat: It seems that this group from the Netherlands persists in identifying a cervical length of 30 mm as short and a risk factor for preterm birth, whereas most use  $< 25$  mm as the cut off. If a woman is not at high risk of preterm delivery in the first place (i.e., cervical length 25–30 mm), then the pessary is unlikely to make a difference.

**Bertholdt C, Morel O, Zuily S, et al. Manual rotation of occiput posterior or transverse positions: a systematic review and meta-analysis of randomized controlled trials. *Am J Obstet Gynecol* 2021:S0002-9378(21)01230-8.**

*Summary:* This is a useful meta-analysis of all randomized trials with singleton pregnancies at  $\geq 37$  weeks gestation in which patients who underwent rotation from occipitoposterior (OP) positions were compared with non-rotation control patients. The primary outcome was the rate of spontaneous vaginal delivery. Additional secondary outcomes were rates of OP position at delivery, operative vaginal delivery, cesarean delivery, postpartum hemorrhage, obstetrical anal sphincter injury, prolonged second stage of labour, shoulder dystocia, neonatal acidosis, and phototherapy. Subgroup analyses were performed according to type of position (OP or transverse), technique used (whole-hand or digital rotation), and parity (nulliparous or parous). The methodology was robust, with the quality of each study evaluated using the revised Cochrane

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risk-of-bias tool for randomized trials. The meta-analysis used random-effects models depending on heterogeneity, and risk ratios were calculated for dichotomous outcomes.

Seven studies involving 1402 women were included, of whom 704 were in the manual rotation group and 698 were in the control groups. Manual rotation for OP position was associated with a higher rate of spontaneous vaginal delivery, at 64.9% versus 59.5% (RR 1.09; 95% CI 1.03–1.16;  $P = 0.005$ ; 95% prediction interval 0.90–1.32) and was also associated with a reduction in OP or transverse positions at delivery (RR 0.64; 95% CI 0.48–0.87) and episiotomy (RR 0.84; 95% CI 0.71–0.98). The groups did not differ significantly in the rates of cesarean or operative vaginal deliveries or in neonatal outcomes. The authors therefore concluded that manual rotation increases the spontaneous vaginal delivery rate.

*Comment:* I have always regarded manual rotation as simply something one did, where possible, when encountering an OP or transverse position at or near full dilation. It never occurred to me that this would be subject to a trial. Beyond the very small risk of cord prolapse if you dis-impact too much, it always seemed the logical thing to do to reduce the occipito-frontal diameter that presents in OP positions. I am glad to read that my clinical impression was correct, although I am puzzled as to why there was no reduction in operative delivery rates—a result of the sample size?

**Sklar A, Sheeder J, Davis AR, et al. Maternal morbidity after pre-term premature rupture of membranes at <24 weeks gestation. Am J Obstet Gynecol 2021:S0002-9378(21)01185-6.**

*Summary:* This is an intriguing retrospective cohort study in which maternal morbidity after preterm premature rupture of membranes at <24 weeks gestation was compared between women who choose either expectant management or termination of pregnancy.

Patients between 14 and 23<sup>6</sup> weeks gestation with singleton or twin pregnancies were included in the study. The primary outcome was the difference in composite maternal morbidity between the two groups. Composite maternal morbidity was defined by at least one of the following: chorioamnionitis, endometritis, sepsis, unplanned operative procedure after delivery (e.g, dilation and curettage, laparoscopy, laparotomy), injury requiring repair, unplanned hysterectomy, unplanned hysterotomy (excluding cesarean delivery), uterine rupture, hemorrhage >1000 mL,

transfusion, maternal intensive care unit admission, acute renal insufficiency, venous thromboembolism, pulmonary embolism, and readmission within 6 weeks. Logistic regression was used to quantify the association between initial management decision and composite maternal morbidity.

A total of 208 patients were included, of whom 108 (51.9%) selected expectant management and 100 (48.1%) selected termination of pregnancy as initial management. Among women selecting termination, 67.0% underwent induction and 33.0% dilation and evacuation. Compared with termination, women pursuing expectant management had 4.1 times the odds of developing chorioamnionitis (38.0% vs. 13.0%; 95% CI 2.03–8.26) and 2.44 times the odds of postpartum hemorrhage (23.1% vs. 11.0%; 95% CI 1.13–5.26). Intensive care unit admission and unplanned hysterectomy occurred only with expectant management (2.8% and 0.9%, respectively). Composite maternal morbidity was higher in the expectant management group at 60.2% versus 33.0% in the termination group. After adjusting for gestational age at rupture, site, race/ethnicity, gestational age at entry to prenatal care, preterm premature rupture of membranes in a prior pregnancy, twin gestation, smoking, cerclage, and cervical examination at time of presentation, expectant management was associated with 3.47 times higher odds of composite maternal morbidity (95% CI 1.52–7.93), corresponding to an adjusted relative risk of 1.91 (95% CI 1.35–2.73). These results show that expectant management of preterm premature rupture of membranes at <24 weeks gestation is associated with significantly increased maternal morbidity when compared with termination of pregnancy.

*Comment:* We often forget the “M” in MFM (maternal–fetal medicine). In most tertiary centres in Canada, the threshold for viability has become 22 weeks, and thus termination at 24 weeks is becoming less and less frequently considered as an option. It behooves us to always remember that we have two patients.

**Sentilhes L, Seco A, Azria E, et al. Conservative management or cesarean hysterectomy for placenta accreta spectrum: the PACCRETA prospective study. Am J Obstet Gynecol 2021:S0002-9378(21)02655-7.**

*Summary:* Placenta accreta spectrum is a life-threatening condition that has increased dramatically worldwide in recent decades, alongside cesarean rates. Both cesarean hysterectomy and conservative management have

proponents and are widely practised, but maternal outcomes have not been thoroughly compared.

An observational cohort study of women with placenta accreta spectrum who had either a cesarean hysterectomy or conservative management (placenta left in situ) during cesarean delivery was conducted from a population of 520 114 deliveries in 176 hospitals (the PACCRETA study.) Clinicians prospectively identified women meeting the inclusion criteria, and data collection started only after women had received information and agreed to participate in the study in the immediate postpartum period. The primary outcome was the transfusion of more than 4 units of packed red blood cells within 6 months postpartum. Secondary outcomes were other maternal complications within 6 months. Propensity-score weighting to account for potential indication bias was used.

Eighty-six women had conservative management, and 62 underwent cesarean hysterectomy for placenta accreta

spectrum during cesarean delivery. The primary outcome occurred in 14 of 86 women in the conservative management group (16.3%) and 36 of 61 (59.0%) in the cesarean hysterectomy group (risk ratio in propensity-score weighted model, 0.29; 95% CI 0.19–0.45). Rates of hysterectomy, total estimated blood loss exceeding 3000 mL, any blood product transfusion, adjacent organ injury, and non-postpartum hemorrhage—related severe maternal morbidity were lower with conservative management than with cesarean hysterectomy (all adjusted,  $P \leq 0.02$ ); rates of arterial embolization, endometritis, and readmission within 6 months of discharge were higher.

*Comment:* This is a thought-provoking study that seems to fly in the face of current practice in Canada and in many centres in North America. We tend to recommend transfer to centres with teams specialized in this challenging surgery. Does this mean that an alternative method is better? Is a multicentre randomized controlled trial needed?