Is there a role for microbiological specimens in threatened preterm labour?

Sileo FG [1], Inversetti A[2], Locatelli A[3], Facchinetti F[4]

[1] Clinical and Experimental Medicine Doctorate School; University of Modena and Reggio Emilia, Modena, Italy; [2] Humanitas University, Department of Biomedical Sciences, Pieve Emanuele (MI), Italy ; [3]Obstetrics and Gynecology Unit, School of Medicine and Surgery, University of Milano Bicocca, Milan, Italy; [4] Unit of Obstetrics and Gynecology, Department of Medical and Surgical Sciences for Mother, Child and Adult, University of Modena and Reggio Emilia, Modena, Italy.

Objective

to evaluate the possible relationship between *cultural specimens* and *Preterm Birth (PTB)* in women admitted for threatened preterm labour. (tPTL)

Design: retrospective, multicentre, cohort study.

Methods

Inclusion criteria: admission for tPTL (i.e. cervical changes + uterine activity < 37 w at the Obstetrics Unit of the hospitals of Modena, Monza, Carate and Vimercate).

Exclusion criteria: twin pregnancies, pPROM at admission.

Data about maternal history, pregnancy complications, cervical length, vaginal swabs and urine culture at admission, gestational age at delivery were collected.

Primary outcome: the incidence of PTB according to risk factors, cervical length and microbiological test at admission.

Secondary outcomes: the incidence of very early (<28 w), early (28-34 w) and late (34-37 w) PTB according to microbiological tests at admission.

Results

250 women were included: PTB <37w occurred in 44.4% women admitted for tPTL.

PTB (< 37 weeks) incidence was not different between those with a positive or a negative vaginal swab (45.7% vs. 39%, p=0.38), or positive vs. negative urine culture (31.8% vs. 42.1%, p=0.23) at admission (see also Tables 1-2).

A shorter cervical length at admission was found in women with subsequent PTB (17± vs 19.5± mm, p=0.03). Cervical length <15 mm (OR 1.82, CI95% 1.03-3.23, p=0.039) predicted the risk of PTB. Further, only the history of a previous PTB (p=0.02) and a previous uterine curettage (p=0.045) were associated with PTB.

Conclusions

The search for vaginal or urinary infections in women admitted for threatened Preterm Labour is not an useful predictive tool to identify those at increased risk of PTB.

Prospective randomized controlled trials are required to confirm the results of this observation.

Table 1–Incidence of PTB at different gestational age according to vaginal swab results.

	+ve Swab	-ve Swab	P-value
PTB < 28 w	**71.4%**	**28.6%***	*0.046*
PTB 28-34 w	37%	63%	0.73
PTB 34-37w	36.1%	63.9%	0.78

*only 7 cases of PTB < 28 weeks

Table 2 – Incidence of PTB at different gestational age according to urineculture (UCU) results.

	+ve UCU	-ve UCU	P-value
PTB < 28 w	50%	50%	0.18
PTB 28-34 w	24%	76%	0.82
PTB 34-37w	14.3%	85.7%	0.08

Disclosure: accepted for publication, in press on Gynecol Obstet Invest ISSN: 0378-7346