



STUDY SUMMARIES

Actim[®] Partus

Kekki, M. et al.
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INSULIN-LIKE GROWTH FACTOR-BINDING PROTEIN-1 IN CERVICAL SECRETION AS A PREDICTOR OF PRETERM DELIVERY

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“Pregnant women who are in preterm labor with intact fetal membranes and who have a positive phIGFBP-1 test result in cervical secretion have an increased risk of preterm delivery.”

Method

The study sample included 72 pregnant women who presented with preterm uterine contractions before 37 weeks of gestation. The study was conducted at the Department of Obstetrics and Gynecology, Helsinki University Central Hospital. Sterile speculum examination was performed to all 72 women to collect samples for a quantitative assay of phIGFBP-1 and for Actim PROM test, to exclude rupture of fetal membranes.

A control group of 58 asymptomatic women without history of preterm had also swab samples for assay of phIGFBP-1 and for Actim PROM. The samples from the patients and controls were taken at the same gestational weeks. All subjects were native Finnish Caucasians.

Results

Nine women with a positive Actim PROM test result were excluded from further analyses. Of the total of 63 women with preterm uterine contractions and intact fetal membranes, 17 showed a positive phIGFBP-1 result and 46 a negative result. Of the 17 women who had a positive phIGFBP-1 result, seven had preterm delivery (two pairs of twins) and of the 46 women who had a negative phIGFBP-1, three delivered preterm (one pair of twins).

Six women out of 63 women had genital tract infection diagnosed. In four of them, the phIGFBP-1 test result was positive and all four had preterm delivery. In two patients with genital tract infection, phIGFBP-1 was negative and neither of them delivered preterm.

In the control group three of the 58 had a positive phIGFBP-1 result and 55 had a negative result. None of the the women with a positive phIGFBP-1 result had preterm delivery. One woman with a negative test result delivered preterm.

TABLE 1. Prediction of preterm deliveries (before 37 weeks of gestation) with Actim Partus test.

		Women with uterine contractions*			Women with uterine contractions and infection present			Women admitted to hospital			Asymptomatic controls		
		< 37 weeks	> 37 weeks	Total	< 37 weeks	> 37 weeks	Total	< 37 weeks	> 37 weeks	Total	< 37 weeks	> 37 weeks	Total
Actim Partus test	Pos	7	10	17	4	0	4	7	4	11	0	3	3
	Neg	3	43	46	0	2	2	1	8	9	1	54	55
	Total	10	53	63	4	2	6	8	12	20	1	57	58

*All women, including women with infection and women admitted to hospital

Conclusion

It is well known that preterm uterine contractions alone poorly predict preterm delivery. In this study it was shown that an elevated pHIGFBP-1 concentration in cervical secretions is an additional predictor of preterm delivery. Thus, the measurement of pHIGFBP-1 in cervical secretion may provide an additional tool to distinguish between those women with preterm labor who are at real risk of preterm delivery and may therefore need special attention, and those in whom contractions are not harmful.

Only minimal amounts of IGFBP-1 are present in urine and seminal plasma (Rutanen et al., 1993). This means that recent intercourse does not limit use of the pHIGFBP-1 test among patients with preterm contractions, and urine, which may mimic amniotic fluid in the vagina, does not interfere with the measurement. Heavy bleeding prevents the use of pHIGFBP-1 measurement in the cervix, but bleeding itself is a clear risk factor and the use of additional tests is unnecessary.

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