Clinical observations on the course of oxytocin-
or prostaglandin E2/oxytocin-induced
parturition in mares

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Abstract

The objective of this study was to compare the course of parturitions induced with sole oxytocin with those induced with the combination of intracervical prostaglandin E2 jelly and oxytocin. For this purpose 13 mares in advanced pregnancy were allocated to the groups pretreated with either intracervical PGE2 (experimental group) or saline (control group) two hours before intravenous oxytocin (5 IU) administration. The mares were compared with respect to cervical dilation diameter (CDD) 20 min. after oxytocin injection. Time intervals from the first oxytocin dose to: the first external signs of parturition, the chorioallantois rupture, the delivery of a foal and time interval from the delivery of a foal to the placenta separation were measured.

Cervical dilatation diameter as well as proportion of mares with cervical dilatation > 20 cm were significantly higher in the group of PGE2 treated mares comparing with control group (p = 0.0115 and p = 0.0490, respectively). All time intervals measured were statistically insignificant for both groups of mares, however time intervals from the first oxytocin dose to the first external signs of parturition, to the allantochorion rupture and to the delivery of a foal, were very close to the significance level (α = 0.05).

To conclude, PGE/oxytocin combination has positive influence on the preparation of the uterine cervix to parturition. Moreover, it seems that PGE2 pretreatment reduced total oxytocin dose for successful parturition induction and shortened time elapsing between the first oxytocin dose and the delivery of a foal what is crucial for foal’s safety.

Key words: parturition induction, mare, PGE2, oxytocin

Introduction

The endocrine regulation of equine parturition involves progestagens, oestrogens, prostaglandins and oxytocin as in other species but in many aspects is an unique one. Total progestagen concentrations rise and total oestrogen levels fall in the mare during the last 20-30 days of gestation and show changes typical