MECHANISM OF ABORION IN MARES DURING EARLY GESTATIONAL PERIOD

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Introduction

Reproduction of horses especially of sport breeds is influenced by the season. In addition, pregnancy of the mare lasts for a long period (11 months in average) which contributes to the value of a newborn animal. Considering costs of breeding sport horses and mentioned facts care should be taken to permanently develop the knowledge about abortion in mares in aim to diagnose loss of pregnancy or to eventually detect signs which leads to abortion, or even to prevent this phenomenon if possible.

Researchers involved in reproduction of horses are still investigating the causes and mechanism of abortion in mares. Double gestation (twins) is rare phenomenon in species of domestic animals (1, 2). Considering that mares usually abort twins with significant consequences (even the long-term sterility) this phenomenon should be more examined (3, 4, 5).

Material and method

With aim to better understand the mechanism of abortion in mares during early gestation we performed the early pregnancy diagnosis, by means of transrectal ultrasonography in period from 19 to 25 days after last mating in mares with no obvious signs of coming heat. Mares were of Yugoslavian throtter breed. Because of unpredictability of the phenomenon and no possibility of planning of the trial, we collected the data during three years. We used the echocamera "ALOKA", real time, B mode, with 5 MHz transrectal probe, linear array. The pregnancy diagnosis was made after presence of two nonechogenic, oval or circle shaped dark surfaces that were conceptuces inside the lumen of both uterine horns. After the ultrasonic detection of twins, we manually squeezed one of them according to the wish of the owner, which was hazardous and not scientifically. After three weeks we performed control ultrasonic examination.
Results and discussion

In 5 of 95 (3.1 %) examined mares we diagnosed twins, in all cases the conceptuses originated from different ova. In three mares we performed transrectal, manual elimination of one conceptus, while in the fourth we did not (left as control), and in the fifth we induced abortion by use of PGF2 alfa analogue.

Of three mares in which elimination was performed, in two, the remnant conceptus continued growth and in therm they gave birth of only one foal, while the third mare developed chronical endometritis with no further cycling.

The fourth mare aborted twins during the seventh month of pregnancy.
The mare in which we induced abortion came in estrous and conceived regularly.
The control mare aborted lately as predicted.

These data indicates that the mechanism of abortion in mares during early pregnancy is rather resorption than expulsion, because in mares that foaled regularly, after the death of one conceptus, the remnant continued the growth. In case of expulsion both conceptuses would be eliminated through the cervix. But, the expulsion is the preferred mechanism for abortion because no consequences occurred for further reproduction, which may be concluded after event of the mare in which abortion was induced hormonally and successful conception after next mating.

In third case expulsion did not occur, but the content of one conceptus caused the chronical endometritis and waste of the second conceptus, namely late and expected abortion.

References