MODERN METHODS FOR DETERMINATION OF COWS 'DISORDERS AND INFERTILITY

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Abstract

The article presents the results of ultrasound detection of cow calving and infertility. Annotation: In this article, the results of the use of ultrasound equipment in the diagnosis of pregnancy and infertility in cows.

Key words: cervix, ovaries, ovaries, corpus luteum, fetal membranes, placenta, endometritis, infertility, fetus.

I. Introduction

Relevance of the topic: Better satisfaction of the demand of the population of the Republic for livestock products is one of the main aspects of the agrarian policy of our state. That is why many different breeds of cows are brought to the farms of the Republic. One of the main problems in the adaptation of these animals to the climatic conditions of the Republic is their gynecological diseases, the main part of which is infertility. It is important to feed, keep, feed and implement measures to combat various diseases on the basis of modern technologies. In particular, due to the high incidence of infertility and ovarian diseases among productive cows, farms are suffering huge economic losses due to a sharp decline in productivity of farms and population cows, reduced fertility, reduced use of high-yielding animals.

At present, the use of ultrasound in the early diagnosis of pregnancy and infertility in cows is widely used. Because with the help of this device it is possible to determine not only the fertility and infertility of cows, the development of the fetus, as well as the formation of the fetal membranes [4]. In veterinary medicine, studies have been conducted using ultrasound scanners to study the presence, volume, and nature of fetal fluid [5]. Ultrasound examination of cows by Mateus et al. (2002) showed that the volume of uterine fluid is mainly related to uterine dysfunction and that fluid volume can be assessed by the growth of bacteria in the uterus [6].

II. Main part

A specialist with good experience, i.e. a daily genital scanner, can visualize the embryo and record the heartbeat as early as 19-24 days after fertilization when using a high-quality ultrasound machine and a sensor with a frequency of 7.5-10 MHz (S. Curran et al. , 1986).

In the early days of pregnancy, the amniotic fluid, the embryo, its ovaries and non-ovarian structures need a lot of time, attention and sharp eyes to observe. In the early stages of embryogenesis, the fetal bladder contains a small amount of pre-fetal fluid and grows into the fetal lining. The embryo is very small, located close to the uterine wall, and may be hidden between the folds of the endometrium. On the 20th day of fertilization (gestation), the size of the embryo is 3 mm - the size of a small rice - round-toothed (kopchiko-temennoy). On the 22nd day of gestation, the length of the embryo is 4-5 mm, the size of a pea, and the transverse diameter of the ovary is 3-5 mm. By the 25th day of gestation...
alone, the length of the embryo is 5–7 mm, and the transverse diameter of the ovary is up to 10 mm in some places (O.J. Ginter, 1998).

At the end of the embryonic period and at the beginning of the fetal (fetal) period, its vital activity is based on recording heartbeat and movement. In real-time scanning of the embryo, contractions of the heart muscle can be observed as early as 26-29 days of gestation. At 30 days of gestation, the contraction of the heart muscle in the fetus can be 170-200 times per minute, at 3-4 months - 140-160, at 6-9 months - 130-140 times (W. Kahn, 1989).

The absence of heartbeat and motor activity in the fetus is indicative of its death.

Exographic diagnosis of multiple infancy in cows and heifers gives good results at 49–55 days of gestation (J.A. Hinkeldeyet al., 1996). During this period, the size of the embryo is 2.7-4.5 cm; the hand is good for polypositional scanning (from several points, at different angles, and on different surfaces) because the developing horn of the uterus is not very large.

The use of a scanner as an additional screening method allows not only a more accurate diagnosis of existing pathological processes in the reproductive system, but also an objective measurement of the linear dimensions of organs, detecting pregnancy in the early stages of embryonic development [7].

**Object of research and methods.** Diagnosis of cow calving was practically opened at the dairy farm "Chorva-sut servis" in Samarkand district. For bunging, 150 cows on the farm were inspected using the AKU Vesta ultrasound machine. The principle of operation of this device is based on an electrode sensor, the electrode is held on both horns of the uterus by plugging the cow through the rectum, and the screen shows acoustic signals such as the condition of the uterus, the amount of uterine fluid, the presence or absence of the fetus.

According to the analysis of the results obtained, 77 out of 150 head of cows examined were pregnant at different months, 5 head of cows were newborns; Black spots were detected in the ovaries of 3 head of cows, which is a characteristic feature of ovarian cysts.

![Figure 1. Ultrasound appearance of acute endometritis.](image)

1. **Karunkula.**
2. **Fluid in the uterus.**

Inflammation of the ovary was noted in 3 of the examined cows, and the screen showed an enlargement of the left ovary relative to the right ovary. Uterine subinvolution was detected in 2 head cows and a large amount of fluid accumulation in the uterine cavity was noted, with the uterus in the abdominal cavity. In 5 head of cows, accumulation of dark purulent exudate from endometritis-specific symptoms was detected. 3 head of cows were inseminated 25-30 days ago and signs of pregnancy detected. Although there were no changes in the uterus in the 3 head cows examined, signs of leakage and sexual arousal during the sexual arousal phase of the sexual cycle were noted. The remaining cows were found to be infertile.
Figure 2. An integral state of placental tissue in the caruncle.

Conclusion

In addition to the detection of infertility and pregnancy in cows with the help of ultrasound, the diagnosis of diseases of the uterus and ovaries and the detection of the fetus at 25-30 days is achieved. Ultrasound can be used not only to determine the fertility of cows, but also to determine infertility, fetal development, the formation of fetal membranes and the sex of the fetus. In cows, contractions of the heart muscle can be observed as early as 26-29 days of gestation. At 30 days of gestation, the contraction of the heart muscle in the fetus is 170-200 times per minute, at 3-4 months - 140-160, at 6-9 months - 130-140 times.

References: