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Introduction.

The research aim was study of efficiency of Azoxivet for prevention of postnatal diseases at cows, it's effect on the quality colostrum and it's indirect influence on growth, development and livability posterity. Azoxivet (active substance – an azoximer bromid) – it's immunomodulator, which has a positive impact on exchange processes in an organism, has properties of antioxidant, hepato- and membrane-protective actions.

Materials and methods.

For study there were formed three groups of down-calving cows Holstein white-and-black breed with milk production for the previous lactation no less 6000 kg of milk. Cows of 1st group (G1, n=20) received Azoxivet intra-muscularly once at 7 days prior to expected date of an calving at a dose 24 mg (8 ml). Cows of 2nd group (G2, n=20) drug was injected in the same dose at 14 and 7 days prior to expected date of childbirth. Cows of 3rd group (G3, n=20) served as control and were not processed with immune-modulators. Colostrum of cows were received at the first milking after calving, determined it's density, amount of serum proteins and total immunoglobulins.

Role of azoximer bromid in functional system

«mother-fetus» in cows

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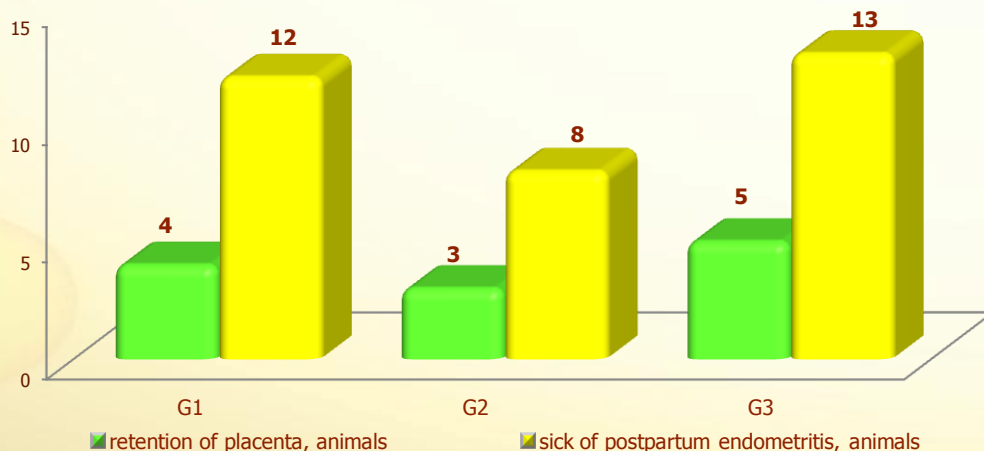


Figure 1 - The incidence of cows in the birth and postpartum periods

Table 1 - Quality indicators colostrum's of cows (n=10)

Indicator	G1	G2	G3
Density, kg / m ³	1060,00±3,07*	1063,00±2,91*	1047,00±4,90
Whey protein, g / l	234,62±8,34	262,70±10,69*	220,47±12,59
Total immunoglobulins, g / l	159,70±9,64*	180,85±4,00***	118,26±11,71

Table 2 - Body weight of calves, kg

Group	1 day of life	2 months of life
G1	37,50±0,97	81,89±1,38*
G2	36,95±1,00	84,89±1,39**
G3	35,80±0,95	77,47±1,63

*P<0,05; **P<0,01; ***P<0,001

Results and discussion.

It's established that single application of Azoxivet at 7 days prior to an calving doesn't lead to lowering trouble of cows of a sharp postnatal endometritis: this disease was registered at 60% cows of G1 and 65% cows of control group. In G2, where Azoxivet was used twice, this pathology was recorded only at 40% of animals (fig. 1).

When studying quality of colostrum it was found that it's density in of G1 and G2 was varied in the range of 1060.0±3.1-1063.0±2.9 kg/m³, which exceeded the indicator of the G3 by 13-16 kg/m³ (P<0.05). There was increased amount of whey proteins in colostrum obtained from cows of G1 and G2: the differences were 6.4% and 19.2% (P <0.05), respectively, in comparison with animals of G3, where this indicator was 220.5 ± 12.6 g/l. The amount of total immunoglobulins in the colostrum of cows of G1 was 159.7 ± 9.6 g/l, in G2 - 180.6 ± 4.0 g/l, that was higher the same indicator in G 3 by 35.0% (P <0.05) and 52,9% (P <0.001) (tab.1).

When were observed the postnatal development of young animals, it was found that the incidence of calves received from cows of G1 and G2 was lower than 15%, than G3, and the safety to the 2-month age was 90-95% against 85% in G3. The average alive mass of 1 calf by the end of the second month in G3 was equal to 77.5±1.6 kg that was lower than in G1 by 5.7% (p<0.05), in G2 – by 9.6% (p<0.01) (tab. 2).

Conclusion.

Thus, double application of Azoxivet to down-calving cows at 14 and 7 days prior to calving promotes decrease in number of cases of development of a postnatal endometritis. Also the use Azoxivet favorably affects the quality of colostrum, which is reflected in an increase in its density, the level of whey proteins and total immunoglobulins. The mediated immune-correction with Azoxivet through the system of fetus-maternal allows to reduce incidence, to increase viability and to stimulate body height and development of calves in the first 2 months of life.