

2024 Batch- Lecture No. 12

Pregnancy Examination in cow-----Continues

Differential diagnosis of pregnancy

Pregnancy in cows is need to be differentiated from following conditions:

1. Bladder, left kidney and rumen confused for pregnant uterus,
2. Tumours,
3. Mummification of bovine foetus,
4. Pyometra,
5. Maceration of bovine foetus,
6. Mucometra or hydrometra,
7. Early embryonic/ foetal death followed by abortion or absorption,

Careful rectal examination may reveal abnormalities or pathology of the pregnant uterus and foetus in such conditions as hydrops amnii and hydrops allantois, foetal monsters, twins, torsion of the iterus, adhesions of the pregnant uterus with an extra-uterine foetus, metritis characterized by lack of tone of the uterus and gaseous crepitation within the uterus that occasionally precedes bacterial abortion.

Differential diagnosis of pregnant uterus from bladder, left kidney and rumen can be easily made by:

1. Careful rectal examination,
2. Considering the anatomical structures of these organs,
3. Their relations with other organs and
4. Their consistency.

Differential diagnosis from Tumours:

Tumours which may create confusion with pregnancy includes:

1. Lymphocytoma,
2. Granulosa cell tumour of ovary,
3. Fat Necrosis of mesentery,
4. Leiomyoma and fibroma of uterus.

MUMMIFICATION OF THE BOVINE UTERUS:

1. It is characterized by the death of the foetus from 3 to 8 months of gestation, failure of abortion, absence of oestrus or parturition, absorption of the foetal and placental fluids, contraction and thickening of the uterine walls, resorption of placentome and the presence of the hard, firm foetus in the closely applied uterine horn lying deep in the abdominal cavity may be confused with pregnancy.
2. History of apparent conception but failure of udder development,, failure of increase in size of abdomen or foetus and failure of parturition. These symptoms should cause the examiner to suspect the presence of this condition.
3. On rectal examination:
 - i. The uterus is usually drawn forward into the abdominal cavity and may require caudal traction on the cervix or lifting of the abdominal wall to bring it within reach of the rectal hand.
 - ii. In mummification of the foetus there are no placentomes or foetal fluids.
 - iii. A thick uterine wall is tightly contracted around a hard, firm foetus, with an absence of the typical “whirring” or fremitus in the uterine artery.
 - iv. If palpable the ovary on the horn containing the foetus has a corpus luteum of pregnancy.

PYOMETRA:

1. Accumulation of pus, from 200 to 20,000 ml in amount in the uterus characterized by failure of estrum and may be confused with pregnancy.
2. Pyometra may occur either postpartum or post service.
3. In most cases pyometra follows a retained placenta and postpartum metritis, in which case there is frequently an intermittent discharge of pus from the vagina.
4. In trichomoniasis or other infections early pregnancy may occur and the foetus may be destroyed by the organisms.
5. The foetus and foetal membranes then macerate with pyometra resulting.
6. In these cases the cervical seal may remain in the cervix for long periods.
7. In pyometra the uterine walls are usually thick and heavy and lack tone.
8. The fluid in the uterus may be watery, syrup like or viscous.
9. The uterine horns are usually unequal in size as in pregnancy.
10. The pus tends to gravitate and collect in the pendant portion of the horns and there is no dorsal bulging of the horn as is often palpated during early pregnancy.
11. The foetus or placentomes cannot be palpated and the foetal membranes cannot be slipped.
12. The uterine arteries are usually contracted and do not whirr.
13. If the diagnosis is not certain, re-examination in one to two months is indicated.
14. In normal pregnancy progressive development of the foetus and uterus occurs, whereas in pyometra the condition remains essentially the same.
15. As in mummification of the foetus the corpus luteum remain on the ovary.

MACERATION OF THE FOETUS:

1. Maceration of the foetus exhibits symptoms similar to those of pyometra with the exception that death of the foetus after fourth months of pregnancy results in the presence of foetal bones in the uterus causing crepitation when palpated.

MUCOMETRA OR HYDROMETRA:

1. It may occur secondarily to an (i) Imperforate hymen, (ii) in the defective horn of a cow with uterus unicornis, (iii) in other anomalies of the development of uterus, cervix and vagina, segmental aplasia and (iv) in long standing cases of cystic ovaries causing a cystic degeneration of the uterine wall.
2. The condition is variable in its manifestation.
3. Anomalies of the development of the paramesonephric or mullerian duct system may not be characterized by failure of oestrus whereas in cystic ovaries failure of estrus is common.
4. The mucus varies in consistency from a thin, watery secretion seen in cystic degeneration of the uterine wall to a heavy mucus secretion in heifers with imperforate hymen, to a gummy and inspissated type of mucus that might be confused with a mummified foetus in certain defects including segmental aplasia of the uterine horn.
5. The uterine wall in most of these conditions is fairly thin but in cystic degeneration of uterine wall it may be so extremely thin that it is difficult to palpate.
6. These conditions differ from pregnancy based on the
 - i. History,

- ii. And on rectal palpation by a failure to slip foetal membranes, by the absence of foetus and placentomes, lack of fremitus or whirring, lack of increase in size of uterine artery and a failure of the progressive development of the uterus in a normal pregnancy.

EMBRYONIC OR EARLY FOETAL DEATH WITH ABORTION OR POSSIBLE ABSORPTION:

1. Death of the embryo or foetus prior to 70 to 90 days of gestation may be followed by immediate abortion or not uncommonly delayed abortion.
2. In early pregnancy the foetal membranes may continue to grow and develop for several weeks after foetal death before showing degenerative changes.
3. Thus a positive diagnosis of foetal death and absorption can only be made late in the absorptive process when the signs of pregnancy do not correspond with the breeding history, a diminished amount of foetal fluids are in the uterus, the membranes feel collapsed and wrinkled upon slipping between the fingers and thumb, the amniotic vesicle may be atonic and flaccid or be absent, and the uterine wall is thick and somewhat contracted.
4. These cases when detected or suspected should be brought to the notice of the owner so that he can watch the cow closely for a recurrence of the oestrus cycle or if this is not observed the cow can be re-examined two to four weeks later.
5. Probably in most of these cases, expulsion or abortion of the degenerated partially macerated embryo and its membranes occurs and is unobserved.