Pregnancy diagnosis

Pregnancy: it is a period extend from fertilization till birth
It is differ according to animal species

Cow	9 months (283 days)
Buffalo	10 months
She camel	13 months
Mare	11 months (330 -340 days)
Sheep- goat	5 month (150 days)
Bitch- queen	63-65 days
Rabbit	30 days
She-elephant	22 month (624 days)
Lion	108 days
Whale	365-547 days

Methods of pregnancy diagnosis in the domestic animals can be classified into:

1-case history (Non return to estrus)

2-clinical sign

3- Abdominal palpation and x rays

4-rectal palpation

5-biological test

6-ultrasonograph

Trans-abdominal (Transcutaneous) ultrasonography

Trans rectal ultrasonography

1-case history (Non return to estrus)

Case history taken from the animal owner as following animal was in estrous 21 days ago and doesn't return to estrous. This happens because during pregnancy, the fertilization inhibits the regression of the corpus luteum and thus, prevents the animal from returning to estrus

This not accurate diagnosis because there is several causes lead to anestrus

2-clinical signs

In last stage of pregnancy especially in the heifers females

The following signs can be observed

1-enlargement of udder

2-elargement of abdomen

3-physilogical edema of external genitalia (valve- vagina)

4-animal increase in weight and size

3-abdominal palpation and x rays

Used in small animal (ewe- she goat-bitch-queen)

<u>abdominal palpation</u>

by lifting the abdomen held between both hands and location of bony fetal structures. However, sometimes content in the rumen may confuse with pregnancy.

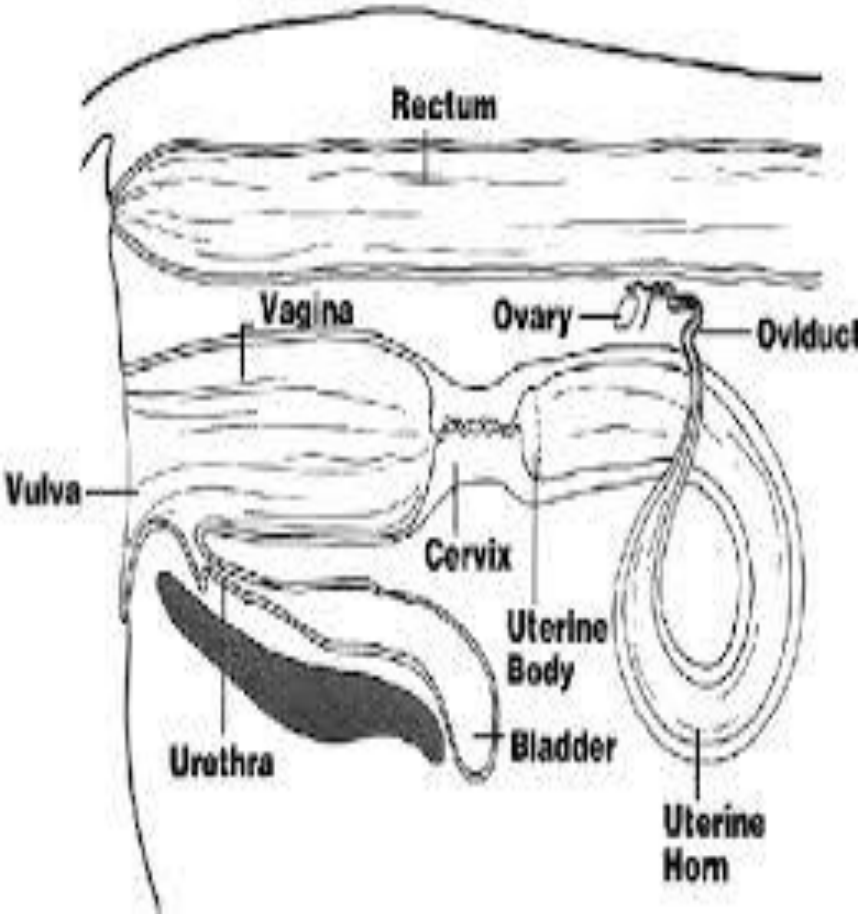
<u>X rays</u> diagnostic in case of small animal especially in the late stage as skeleton of fetus completely formed.

4-rectal palpation

It is one of the most active method uses for pregnancy diagnosis

Technique

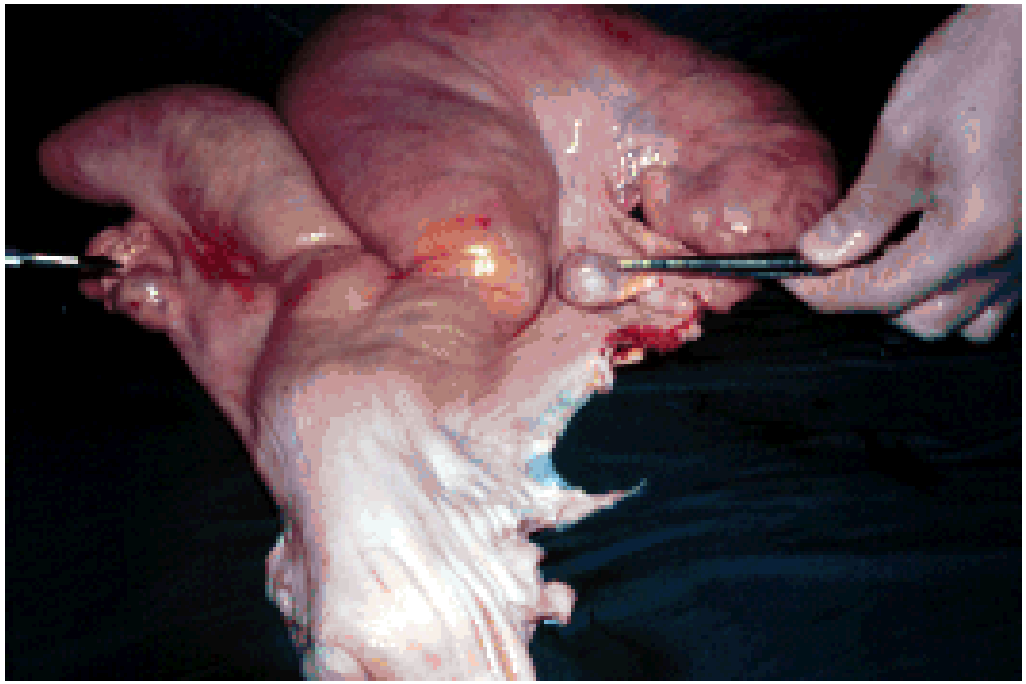
- Insert the lubricant hand in cone shape push it inside the rectum. The anal sphincter dilates and the hand enters inside the rectum.
- The feces must be removed without taking out the hand completely.
- Gentle palpation to the content of uterus and structure of the ovaries



Result

If female pregnant

- Uterine horns asymmetrical
    - Corpus luteum present above ovary



5-biological examination

These tests depend on the presence of (pregnant mare serum gonadotropin hormone so it Diagnostic for mare PMSG characterized by

1. non pituitary gonadotropin hormone
2. Has F.S.H like action and traces of L.H action
3. Appear in blood between 40-140 days of pregnancy
4. Reach it maximum level at 60-110 days
5. Secreted from endometrial cups of placenta of mare

a)Ascheim –zondek test

Materials

- 4 sexually immature female (rat or mice)
- Serum of suspected female

Method of test

- S/c injection .2ml of tested serum in the 2 rats or mice

Other 2 rats left as control

- After 2 days slaughter the tested rats and examine ovaries

Result

If suspected mare pregnant the rats or mice show the following signs

- Enlargement of the ovaries
- Presence of corpus luteum or corpus hemorragicum
- Swelling in genital tract(valve and vagina)

- .

b) Friedman's test

Materials

- 2 sexually immature rabbit
- Serum of suspected female

Method

- Inject 15 ml intravenous in one of the female rabbit and other one left as control
- Wait for 2 days and then slaughter the rabbit and examine the genital system

Result as previous test

c) Gallimainini test (fast test)

- Bring immature male frog
- Inject .3 ml of suspected mare serum in dorsal lymphatic sac
- Wait for 4-6 hours then collect urine from cloacae
- Make smear and staining by methylene blue 1% and examine under microscope

Result

If spermatozoa appear the female is pregnant