ENDOMETRITIS

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LESSON III

- *Diagnosis of endometritis*

CLINICAL ENDOMETRITIS

- **Observation of vaginal discharge with pus.**

CLINICAL ENDOMETRITIS

- **The contents of the vagina should be inspected for the presence of pus.**

- **Manual vaginal examination**

CLINICAL ENDOMETRITIS

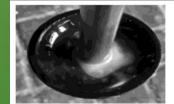**Vaginoscopy:** Inspection of the mucus flowing out of the cervix.

CLINICAL ENDOMETRITIS

Metricheck®: Consists of a stainless steel rod with a rubber hemisphere that is used to rake out the vaginal contents
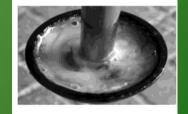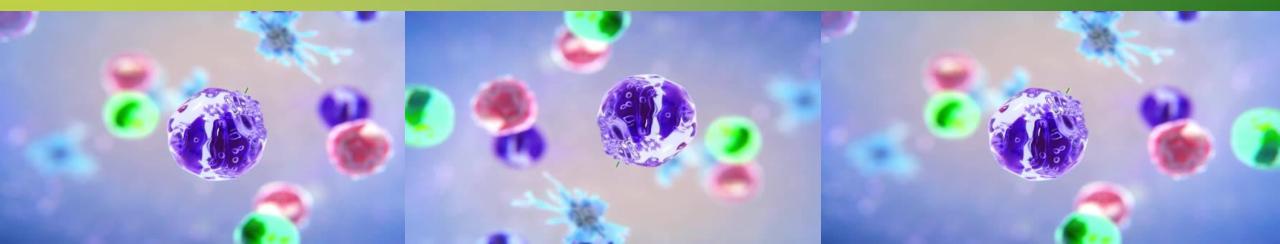
SUB-CLINICAL ENDOMETRITIS

- **Without any expression of clinical signs**, the diagnosis of subclinical uterine infection remains a challenge .

- **There is massive infiltration of the endometrium and the uterine lumen with neutrophils / Polymorpho nuclear leucocytes (PMN) cells.**

- Detection of neutrophils / PMN cells

"WHITE SIDE TEST"

Field level, simple and rapid 'Cow-side' test:

1. Cervical mucus is collected aseptically

2. One ml of cervical mucus is taken in a sterile test tube + One ml of 5 to 10% sodium hydroxide solution is added to it and mixed gently.

3. The mixture is heated over a spirit lamp up to boiling point.

4. After cooling, the intensity of colour changes is studied and graded

Interpretation of results

Colour		Degree
1 Turbid or no colour	–	Normal
2 Light yellow colour	–	Mild
3 Yellow colour	–	Moderate
4 Dark Yellow	–	Severe

Turbid   Mild Yellow   Yellow   Dark Yellow
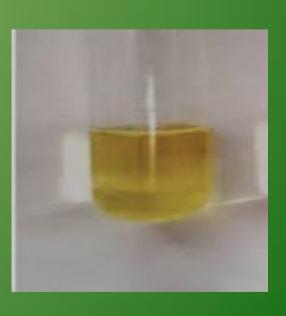
- **Positive reaction to white side test might be due to neutrophil infiltration due to inflammatory exudation in the infected genitalia**

   > The normal cervical mucus contains fewer numbers of leucocytes to cause such changes in colour

   > In subclinical endometritis, cervical mucus contains a high number of leucocytes producing a colour reaction

ENDOMETRIAL CYTOLOGY

Endometrial cell samples can be subjected for cytological examination

> **Uterine lavage technique**

> **Cytobrush technique**

UTERINE LAVAGE

- Small volume (10 - 20ml) of 0.9% sodium chloride solution is infused into the uterine body with a syringe attached to a sterile AI sheath.

- The uterus was massaged

- Fluid is recovered by negative pressure aspiration

- Transferred to a collection tube and centrifuged

- Sedimented cells are streaked on to sterile slide – dried and stained with modified Giemsa stain.
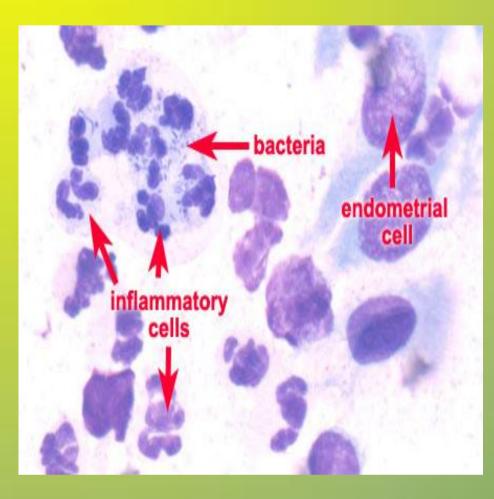
CYTOBRUSH

- **Cytobrush** along with sanitary plastic sleeve is passed trans-cervically into the uterine body.
- The brush was rotated over the uterine wall and withdrawn.
- Endometrial cytology samples are prepared by rolling the brush onto a clean glass slide.
- The slide is air-dried and stained.

CYTOLOGY INTERPRETATION

Different thresholds of PMN cells during different periods postpartum have been used to indicate subclinical endometritis.

- **>18% PMNs at 20 to 30 days PP**
- **> 8% PMNs at 30 to 40 days PP**
- **> 5% PMNs at 40 to 60 days PP**

ULTRASONOGRAPHY

- **Ultrasonography has been used as a method to diagnose subclinical endometritis based on**

    > **the presence of intrauterine fluid and**

    > **evaluation of uterine wall thickness**

- **A small amount of fluid in the uterine lumen and/or thickened uterine walls can be considered signs of endometrial inflammation.**

DIAGNOSIS OF ENDOMETRITIS

CLINICAL ENDOMETRITIS	SUB-CLINICAL ENDOMETRITIS
- Based on clinical signs - Purulent or muco-purulent discharge. - Vaginal contents should be inspected for presence of pus.	- No clinical signs - Clear discharge (some animals show copious discharge) - Repeat breeding - Field / lab test

SUMMARY

- **Clinical endometritis can be easily diagnosed by clinical signs.**

- **Subclinical infections have to be diagnosed based on Whiteside test or cytology study.**

- **Once the condition is diagnosed, we have to attempt for appropriate treatment.**

Thank you !!