

Normal Semen Analysis

-Hitali Mali

Why

- ▶ Semen- spermatic fluid
- ▶ Sterility
- ▶ Evaluation of male fertility
- ▶ Confirm vasectomy
- ▶ Reflects the activity of testes and other sex organs

Normal features

- **Volume-** 2.5-5ml (decrease in functional disorder or inflammation of male genital organs)
- **Colour-** white, opalescent, mucoid, sticky
- **pH-**7.2-7.7, below this indicates semen primarily contains prostatic fluid.
- **Morphology-**sperms are one of the smallest cell.

Abnormality-bifid, bifurcated tail, spirally coiled tail etc if present more than 30% of sperms its abnormal

- **Motility-** good motility because of flail-like tail.
>80% sperms should have normal motility, if <40% motile sperms considered abnormal

- **Count-** 60-120 millions/ml

20-40 million/ml-infertility

Below 20- sterility

- **Fructose-** present, absence indicates absence of seminal vesicle.
- **Clotting-** conversion of fibrinogen into fibrin
- **Liquefaction-** presence of plasmin

Procedure

- ▶ **Principle?**
- ▶ **Requirement-**
 - Microscope
 - Viscometer
 - Neubauer's chamber and WBC Pipette
 - Freshly collected sample of semen
 - Diluting fluid- 5% sodium bicarbonate in 1% phenol solution

Procedure

- Collect semen sample after 2 days of abstinence followed by person.
- Wait for liquefaction then measure volume
- Assess motility-

Also assess the morphology

- Count the sperms-WBC pipette

Calculation- $n \times 50 \times 1000$

- pH
- Viscosity- viscometer
- Fructose- biochemical test

► **Observation-**

- Volume
- Motility
- Count
- Liquefaction
- Morphology
- pH
- Fructose content

Precaution

- ▶ Sample should be collected after abstinence
- ▶ Analysis only after 30 mins
- ▶ Analysis should be done within 6 hours if delayed should be refrigerated and temperature should be brought to normal before analysis.