# INFERTILITY AND ITS MANAGEMENT DR. THILINA PALIHAWADANA



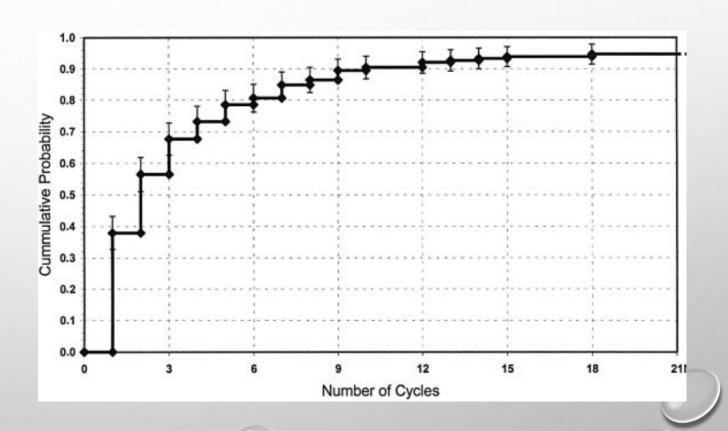
## LEARNING OBJECTIVES

- WHAT IS INFERTILITY?
- WHAT ARE THE CAUSES OF INFERTILITY?
- HOW TO INVESTIGATE FOR AETIOLOGY IN INFERTILITY?
- HOW TO TREAT INFERTILITY?
- HOW TO DEVELOP A MANAGEMENT PLAN FOR A COUPLE WITH INFERTILITY?



## WHAT IS INFERTILITY

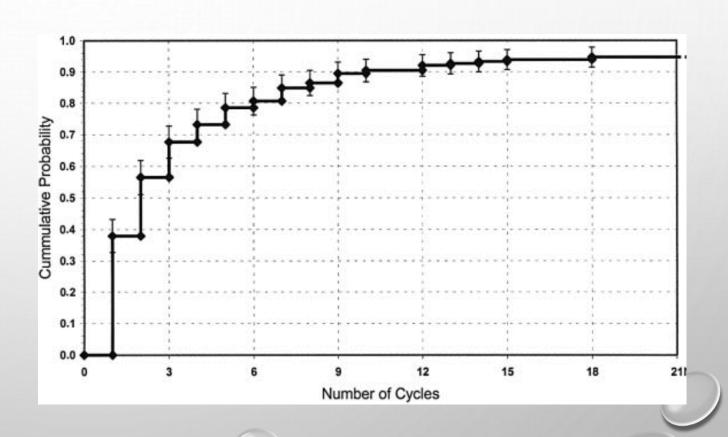
- A COUPLE'S INABILITY TO CONCEIVE AFTER 1 YEAR OF UNPROTECTED INTERCOURSE
- DEFINE WHEN TO INVESTIGATE AND TREAT





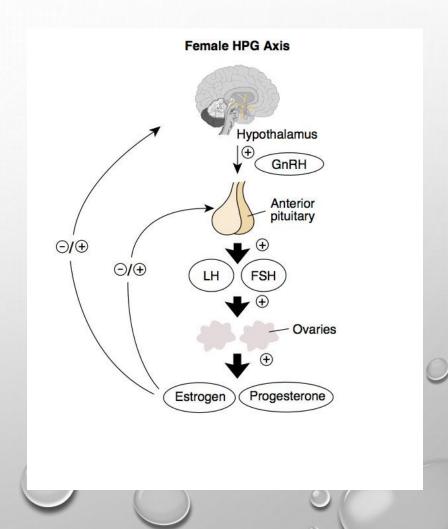
# WHAT IS INFERTILITY

- EARLIER INVESTIGATIONS FOR
  - ADVANCED AGE
  - FEATURES SUGGESTIVE OF ABNORMALITY
  - CONDITIONS AFFECTING
     FERTILITY
  - SOCIAL / PERSONAL REASONS





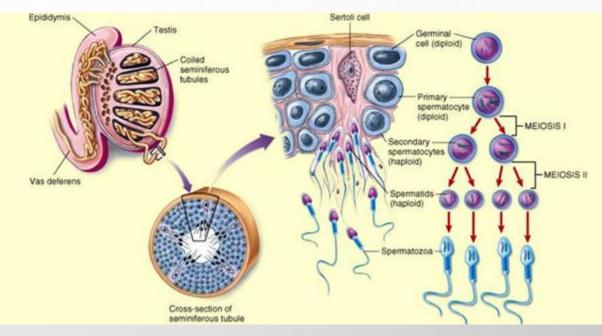
- REQUIREMENTS FOR FERTILITY
  - OVULATION





- REQUIREMENTS FOR FERTILITY
  - OVULATION
  - NORMAL SEMEN PARAMETERS

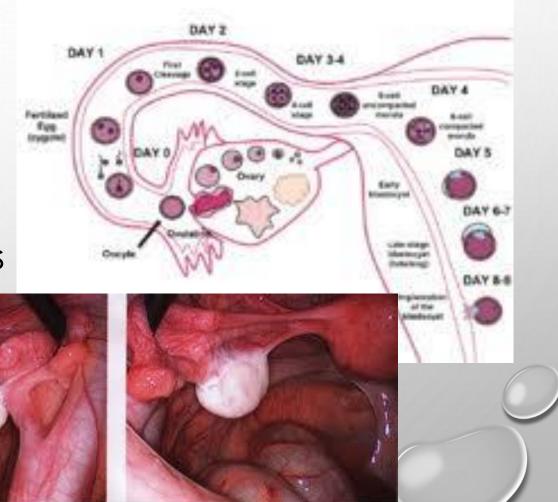






## WHAT ARE THE CAUSES OF INFERTILITY?

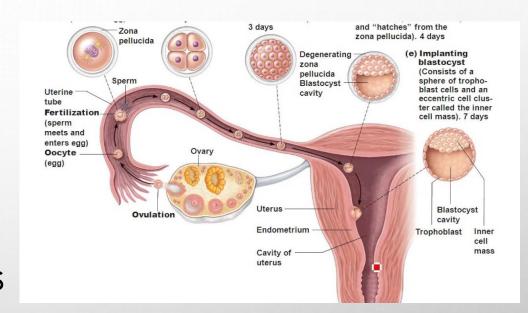
- REQUIREMENTS FOR FERTILITY
  - OVULATION
  - NORMAL SEMEN PARAMETERS
  - NORMAL SEXUAL FUNCTIONS
  - PATENT AND FUNCTIONAL FALLOPIAN TUBES
    - NORMAL PELVIS





## WHAT ARE THE CAUSES OF INFERTILITY?

- REQUIREMENTS FOR FERTILITY
  - OVULATION
  - NORMAL SEMEN PARAMETERS
  - NORMAL SEXUAL FUNCTIONS
  - PATENT AND FUNCTIONAL FALLOPIAN TUBES
    - NORMAL PELVIS
  - NORMAL UTERUS AND ENDOMETRIUM



## WHAT ARE THE CAUSES FOR INFERTILITY

 ANOVULATION OR OVULATORY DYSFUNCTION

- HYPOGONADOTROPIC
   HYPOGONADISM
- HYPERGONADOTROPIC
   HYPOGONADISM
- NORMOGONADOTROPIC
   HYPOGONADISM



SEMINAL FLUID
 ABNORMALITIES

- ANEJACULATION
- ABNORMAL VOLUME,
   COUNT, MOTILITY,
   MORPHOLOGY, VIABILITY
- AZOOSPERMIA



SEXUAL DYSFUNCTION

- FREQUENCY
- REGULARITY
- PENETRATION
- EJACULATION

## WHAT ARE THE CAUSES FOR INFERTILITY

FALLOPIAN TUBE
 ABNORMALITIES

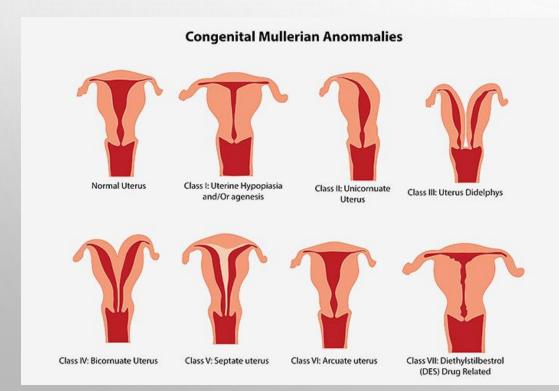
- BLOCKED TUBES
- SCARRED TUBES
- PERITUBAL ADHESIONS

- PELVIC DISEASE
  - ENDOMETRIOSIS
  - PID



## WHAT ARE THE CAUSES FOR INFERTILITY

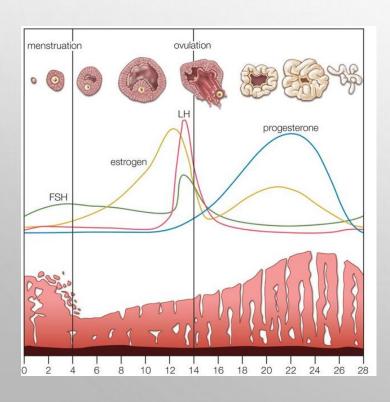
UTERINE ABNORMALITIES



- CONGENITAL
   ABNORMALITIES
  - SEPTATE UTERUS
- UTERINE AGENSIS
- FIBROIIDS
- POLYPS
- ABNORMAL ENDOMETRIUM
  - TB, INFECTION,
     ASHERMAN'S SYNDROME



#### **ANOVULATION**



- MIDLUTEAL PROGESTERONE LEVEL
- USS FOLLICLE TRACKING

- BBT
- LH SURGE

#### SEMINAL FLUID ABNORMALITIES

SEMINAL FLUID ANALYSIS



SPERM FUNCTIONAL TESTS

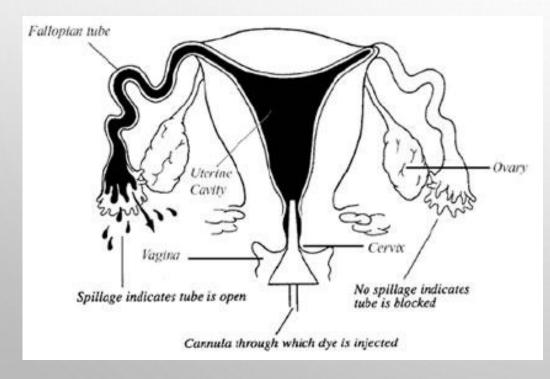
#### **SEXUAL DYSFUNCTION**



#### MAINLY BY HISTORY

- LOW FREQUENCY
  - LACK OF LIBIDIO
- IRREGULAR INTERCOURSE
  - WORK COMMITMENTS
- NON-PENETRATIVE SEX
  - ED
- EJACULATORY PROBLEMS
  - PREMATURE, RETROGRADE

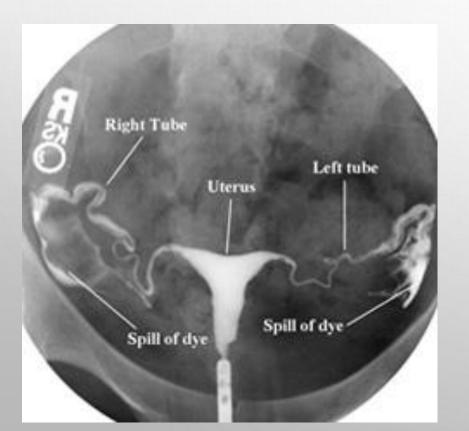
#### **TUBAL DISEASE**



#### HYSTEROSALPINGOGRAM (HSG)

- LOOK AT THE OUTLINE OF UTERUS AND TUBES
- PATENCY OF TUBES CAN BE DEMONSTRATED

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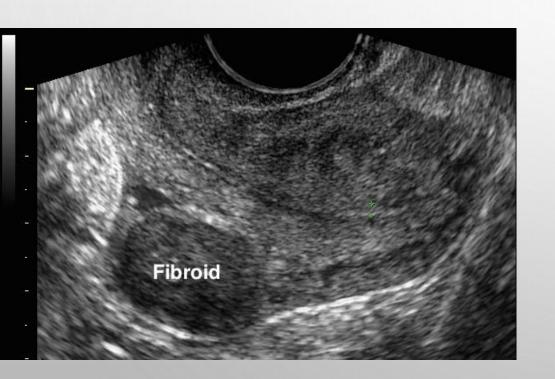
#### **TUBAL DISEASE**



#### LAPAROSCOPY AND DYE TEST

- ASSESS TUBES AND PELVIS
- WHEN PELVIC DISEASE IS SUSPECTED
- CORRECTIVE SURGERY ALSO AT THE SAME TIME.

#### **UTERINE ABNORMALITIES**



#### **ULTRASOUND SCAN**

- GROWTHS AND INDENTATIONS
  - FIBROIDS, POLYPS, ADENOMYOSIS

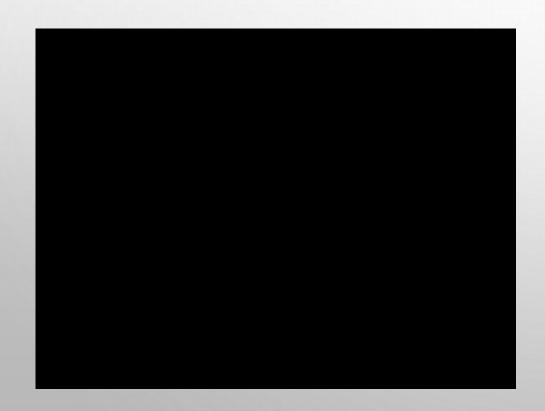
#### **UTERINE ABNORMALITIES**



#### **ULTRASOUND SCAN**

- GROWTHS AND INDENTATIONS
  - FIBROIDS, POLYPS, ADENOMYOSIS
- 3D SCAN TO ASSESS CAVITY

#### **UTERINE ABNORMALITIES**



#### **ULTRASOUND SCAN**

- GROWTHS AND INDENTATIONS
  - FIBROIDS, POLYPS, ADENOMYOSIS
- 3D SCAN TO ASSESS CAVITY
- HYSTEROSCOPY



## HOW TO TREAT INFERTILITY?

- SPECIFIC TREATMENT
  - MYOMECTOMY
  - POLIPECTOMY
  - OVUALTION INDUCTION
- EMPIRICAL TREATMENT
  - AUGMENTATION OF OVULATION
  - INTRAUTERINE INSEMINATION
  - IN VITRO FERTILISATION

# OVULATION INDUCTION / AUGMENTATION

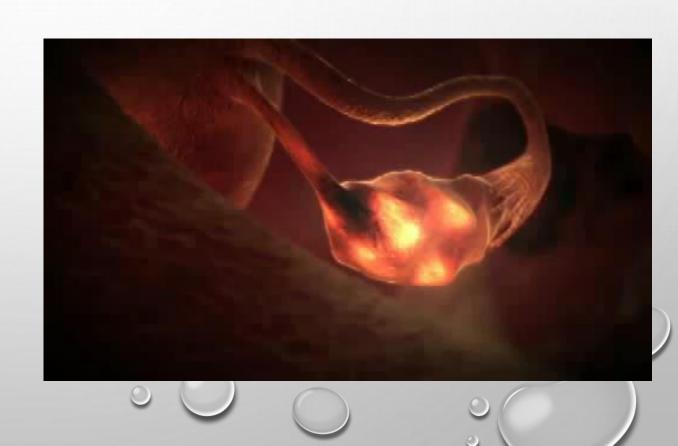
- INDUCTION IN THE PRESENCE OF ANOVULATION
  - FIND THE UNDERLYING CAUSE
    - TREAT IF A TREATABLE CAUSE PRESENT

- AUGMENT / INDUCE OVULATION BY HORMONAL MANIPULATION
  - CLOMIFENE / TAMOXIFENE
  - LETROZOLE
  - GONADOTROPINS
  - LAPAROSCOPIC OVARIAN DRILLING (ONLY IN PCOS)



## INTRAUTERINE INSEMINATION

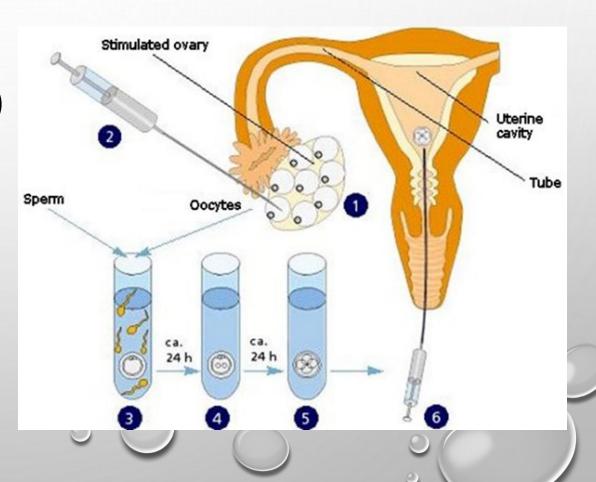
- INCLUDE VARIOUS STEPS
  - OVULATION INDUCTION / AUGMENTATION
  - TIMING OF OVULATION WITH HCG INJECTION
  - SPERM PROCESSING
  - INSEMINATION IN THE UTERINE CAVITY





# IN VITRO FERTILISATION

- INCLUDE THE FOLLOWING STEPS
  - SUPEROVULATION (10-15 OOCYTES)
  - OOCYTE RETRIEVAL
  - SPERM PROCESSING
  - FERTILISATION OUTSIDE BODY
  - EMBRYO REPLACEMENT
  - LUTEAL SUPPORT





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