INTRODUCTION
Introduction :-

The difference in achieving a precise diagnosis of many gynaecological disorders is an intriguing problem of gynaecologist such as primary infertility and primary Amenorrhoea.

Primary Infertility :-

It is defined as inability of couple to achieve pregnancy within one year of defined time of unprotected intercourse with adequate coitus. In couples who report adequate coitus without contraception, pregnancy success can be claimed if 55% of women become pregnant in 1 month & 80% in 6 months or 90% in year infertility is termed primary if conception never occurred, secondary if patient fails to conceive after having produced a child or had undoubted miscarriage. Approximately 10% of married couples of child-bearing age in this country have difficulty in achieving pregnancy.

Both partners in relationship contribute to potential fertility & both may be sub fertile.

The Relative prevalence of Etiologies of Infertility: -

Male factors – 25 – 40%
Both Partners – 10%
Female Factors – 40 – 55%
Unexplained Infertility – 10%
**Basic factors in Female fertility:**

Women must produce a normal fertilizable ovum which enters the uterine tubes within a few hours after extrusion from ovary to be fertilized resulting conceptus must move into the uterus become implanted in an adequately developed endometrium & there undergo normal development.

**Infertility in females:**

Infertility in female is caused by various factors.

To determine the causes of sterility or impaired fertility one must visualize the process of reproduction from gametogenesis to nidation following may be causal factors:

1. *Psychogenic factors* in women notably aversion to coitus.
2. *Coital Errors* in delivery or reception of sperm e.g. premature ejaculation relationship to ovulation penile inadequacies.
3. *Vuval factors* - Vulvitis due to diabetes mellitus.
4. *Vaginal pathologies*
   - Gynatresia.
   - Imperforate hymen
   - Vaginitis whether Candidal Trichomonal or nonspecific often effect sperm adversely.
5. *Cervical pathologies* - cervical factors is the cause of infertility in not more than 5% cases.
• Congenital obstruction
• Tumours e.g. polyp
• Cervicitis
• Displacement of Cx
• Scanty cervical mucus may be prior due to psychogenic or prior conization & cauterization.

6. **Uterine & Endometrial factors** are responsible for cases of Infertility.

• Congenital Anomalies – Bicornuate uterus, subseptate uterus, septate uterus.

• Uterine lesion – polyp, fibromyoma, Intrauterine, adhesions (Asherman’s Syndrome), Ch pelvic inflammation due to post partum or post abortal Gonorrhea & rarely tuberculosis.

7. **Tubal & Peritoneal factors** – they are responsible for 30 – 40% cases of female infertility.

• Tubal patency defects or motility defects.

• Damage or obstruction of fallopian tubes usually associated with previous pelvic inflammatory disease or previous pelvic or tubal surgery the risk of infertility after a single bout of PID is high the incidence of tubal infertility has been reported to be 12%, 23% &
54% after 1, 2 & 3 episodes of P.I.D. respectively.

- Peritubal adhesion.
- Destruction of fimbria

8. *Ovarian factors:* They contribute about 25% cases of female infertility.

- Disorders of ovulation – Complete absence of ovulation, infrequent ovulation.
- Ovarian dysgenesis (Turner’s Syndrome)
- Infections
- Ovarian tumours (Follicular or lutcal)
- Chocolate cyst due to Endometriosis
- Polycystic ovarian disease.

9. Disease of hypothalamus pituitary gland, thyroid disease, adrenal disorders & hyper androgenic oligo ovulation.

10. *Immunological & psychosexual factors* are responsible for 1% case of Infertility.

**Primary Amenorrhoea:**

Defined as absence of menstruation it is symptoms & not a disease it may be either primary or secondary.

*Primary Amenorrhoea:* It is absence of mesus by 16 yrs. Of age in presence of secondary sexual character or by 14 yrs. In absence of secondary sexual character Amenorrhoea may be physiological & pathalogical.
Causes of primary Amenorrhoea:

Approximately 30% of patients with primary Amenorrhoea have an associated genetic abnormality

Amenorrhoea associated with lack of secondary sexual character —

Abnormal physical Examination -

- 5α Reductase deficiency in XY individuals.
- 17 - 20 desmolase deficiency in XY individuals.
- 17α hydroxylase deficiency in XY individuals.

Hypergonadotrophic hypogonadism

- Gonadal dysgenesis (Turner’s syndrome)
- Pure gonadal dysgenesis
- Partial deletion of x-chromosome
- Sex chromosome mosaicism
- Environmental & therapeutic ovarian toxins.
- 17α hydroxylase deficiency in XY individuals
- Others

Hypogonadotrophic hypogonadism

- Physiological Delay
- Kallman’s syndrome
- Central nervous system tumours
- Hypothalmic pituitary dysfunction.
Amenorrhoea with secondary sexual characteristics & Anatomic abnormalities -

- Mullerian anomalies
- Imperforate hymen
- Transverse vaginal septum
- Mayer – Rokitansky Kuster – Hauser syndrome
- Androgen insensitivity
- True hermaphrodites
- Asherman’s syndrome Secondary to prior uterine or cervical surgery
- Curettage specially postpartum
- Cone biopsy
- Loop Electro Excision procedure

Secondary to infections
  - Pelvic inflammatory disease
  - IUD – Related
  - Tuberculosis
  - Schistosomiasis

Physiological Amenorrhoea – Prepubertal, during pregnancy lactation, post menopausal.
Diagnostic Laparoscopy:

Provides a direct visual access to inner pelvic anatomy without restoring to major abdominal surgery physiology of the ovaries, fallopian tubes & uterus can now be studied in more details & fresh knowledge may be revealed.

Direct visualization of pelvic organs can greatly improve the accuracy of diagnosis when surgical intervention is undesirable and when observation or empirical therapy is conservative or ineffective laparoscopy has shown period of great Enthusiasm followed by condemnation. But today the availability of Excellent instrument. Safe source of gas & superb Anaesthesia all have pointed safety factors.

In this Era of rising medical cost where Economy has assumed a major role, diagnostic laparoscopy could provide the gynaecologist an economy with a shortened hospital stay. The critical factors on Evaluation of diagnostic laparoscopy is how far its can contribute to the management of the patients. Laparoscopy has precisely fulfilled the goals set up by its developers & has revolutionized the practice of gynaecology. Physicians have grasped the concept that the laparoscopy provides a picture window to what could only be palpated previously or seen through a large laparotomy incision. Patients have benefited from the rapid diagnosis & recovery time. Minimal cosmetic injury greatly reduced costs, elimination of sexual restrictions avoidance of risks of
major surgery & many fewer delays in treatment. Laparoscopy has eliminated the risk and frustration of clinical observation & has made possible immediate definitive therapy for infertility & primary amenorrhoea thus laparoscopy is very evaluating tool in primary infertility & primary Amenorrhoea