REVIEW
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The birth of modern Endoscopy came with Bozzani (1805) who invented a very complex apparatus which he called 'Lictit Heiter', for the first time the human urethra was visualized in a living subject using a candle as the light source. Desormeaux (1853) made the first serviceable endoscope. Ott (1901, 1902, 1903) was the first to observe peritoneal pelvic organs endoscopically in this ventroscopy procedure he inspected the abdomen cavity with the help of a head mirror & a speculum introduced through a small anterior abdominal wall incision. Kelling (1901) produced pneumoperitoneum in living dogs through a small needle in the anterior abdominal wall to facilitate the performance of coelioscopy with a Nitze cystoscopy.

Jacobeus (1910) (1912) made the first clinical application of the method exploring both the thorax & abdomen naming the procedures 'thoracoscopy & laparoscopy' respectively.

*Jacobeus & Kelling are known as father of laparoscopy.*

Bernnh Hein (1911) described a method of abdominal exploration by means of proctoscope inserted through a short incision in the epigastrium.

Nordentoeft C. (1912) was the first to observe the female genital organs after gaseous distension of abdomen & adoption of trendelenberg position.
Renon (1913) in Paris published a paper on the technique & indication for laparoscopy Ist English paper, appeared in 1925 published by Rendt Short on his work using a cystoscopy to visualize the abdominal viscera through a small abdominal incision.

Kalk (1928) started working with laparoscopic & produced a brilliant instrument he made possible to study & recognize the pathology of internal organs & to make accurate diagnosis.

Ruddock (1937) introduced a biopsy forceps with diathermy coagulation.

Hope (1937) emphasized the value of laparoscopy in the differential diagnosis of Ectopic pregnancy.

Te Linde (1939) attempted Endoscopy of the pelvic organs by vaginal route but abandoned the method because of difficulties due to the presence of small intestine behind the uterus.

Decker (1944) by adoption of the genupectoral position & the induction of pneumoperitoneum created by negative pressure of the position overcame the difficulties expenced by Te Linde & named the procedure culdoscopy, Palmer (1944) did gynaecolgical coelioscopy using the transparietal route in trendelburg position after obtaining gaseous distention both Decker & Palmer have made notable & extensive contributions to the study of sterility in particular & to the other complementary diagnostic & therapeutic techniques.
Fourestir, Glandu & Vulmiere (1952) developed a method of transmitting an Intense light along a quartz rod from the proximal to distal end of the telescope this removed the dangers of accident due to Electrical burns & allowed such Intense light so that photographs could be taken.

Frangenhein (Since (1957) has published many excellent treaties on laparoscopy his personal experience included 1850 peritoneoscopies & culdoscopies performed without serious complications. Frangenhein stressed general anaesthesia and extreme caution in inducing a pneumoperitoneum & avoidance of puncture through previous laparotomy scar.

Steptoe (1960) became interested in laparoscopy & culdoscopy in relation to the unsolved problem of sterility & concluded that in properly selected cases & particularly in field of sterility investigations laparoscopy can be the most important & indeed the only method of accurately assessing certain factors, first international symposium was held in Italy in 1964 & the first text book on laparoscopy was written by Steptoe in English.

Fear (1968) presented a series on 134 patients on which laparoscopy was performed for various indications.

Laparoscopy in Female Infertility—

Cohen R. Melvin (1968) compared peritoneoscopy v/s culdoscopy & concluded that peritoneoscopy afforded a more detailed & close inspection of the complete
fallopian tubes, ovaries the uterine ligaments & cul de sac & all surfaces of the uterus. He listed the indications for culdoscopy & peritoneoscopy.

Coltart T.M. (1970) reported the findings at laparoscopy in combination with the installation of dye through the cervix in 36 patients with a diagnosis of bilateral tubal occlusion on HSG they found that fimbrial occlusion was associated with absence of spill in only 21%.

Duignan N. M., Jordan J. A., Edwards Logan R. (1972), performed laparoscopy on 520 patients of primary infertility. 62.5% cases showed no abnormalities whereas 37.5% cases revealed some pathology. They also concluded that laparoscopy provided a more accurate assessment to tubal patency & function than HSG.

Maathius J. B, Horbach GM & Van Hall E. V. (1972), compared the findings of HSG with laparoscopy in 207 cases of infertility for at least 2 years duration. In 46% cases, both methods showed similar results. In 38 of the patients, in whom abnormalities were detected by both procedures, those abnormal findings were found to be non identical. 18% patients with normal HSG were found by laparoscopy to have pathologic conditions seriously affecting tubal function of which peritubal adhesions constituted the majority.

Varma T. R, Harry Murphy (1978) studied 98 cases of primary infertility & 76 cases of secondary infertility by
laparoscopy & found laparoscopy to be very useful in the investigation of infertility. They said that it provided a more accurate assessment of tubal patency & function that did hysterosalpingography.

Hulka (1962) reported a classification system for adnexal adhesions employing HSG & laparoscopy prior to planned repair. Stage of adnexal disease included extent of adhesions, nature of adhesions, fimbrial patency & Isthmic patency. In extent of adhesion stage I is over 50% of the ovarian surface visible. Stage II is less than 50% of the ovarian surface visible. In nature of adhesion type A is filmy, avascular adhesions with good potential organ separation. Type-B is dense, vascular adhesions with minimal potential organ separation.

Verma TR, Thankam & Harry Murphy (1978) performed diagnostic laparoscopic examination in 530 patients mainly for obscure pelvic pain & infertility. They found that as compared to HSG, laparoscopy provided a more accurate assessment of tubal patency & function.

Ansari A. H. (1979) emphasized that, whereas laparoscopy is ultimat procedure for eassessment of peritubal & fimbrial pathology, salpingography is equally indispensable for evaluation of tubal lumen & the uterine cavity.

Rajan R., Joseph K. C., K. Ambika Devi (1981) reviewed 645 HSG’S performed to assess the tubal function in infertile women. The purpose was to detail the
technique of HSG, results of the study & the type of complications encountered.

Rajan R, Girija Leela, V. S. Jetha, Kumar S., Sreedevi NS, L Ajitha Kumari K., Molkutty T & Prabha Kumari C (1984) concomitant with diagnostic procedures they carried out certain operative procedure which could be diagnostic as well as therapeutic & presented their experience with the different types of operative laparoscopic procedures. They felt that the diagnostic accuracy & decisions for treatment achieved a high standard by employing HSG & laparoscopy as complementary procedures, (Rajan & Joseph 1962)

Prof. Mitra R, Agarwal Usha, Srivastava Manjul (1986), studied 92 cases by hysterosalpingography & laparoscopy & found agreement between findings of the two procedure in 61.53% cases. Difference in the findings of the two procedures was noted in 10 (19.26%) cases. They concluded that HSG findings were inaccurate for the diagnosis of peritubal & periovarian adhesions & other pelvic pathology but HSG is useful for luminal study of fallopian tubes & ovary. They suggested that laparoscopy & HSG should be considered supplementary procedures.

Desmukh GA, Vijay Kar I.V, Singhal AB, Tilwani S. P. (1986) investigated 431 case of sterility by laparoscopy & emphasized that tubal factor could not be completely studied by laparoscopy alone, but in occasional cases
required other investigations like HSG & cervical smear culture.

Dastidar Ghosh S., Chattopadhyay S & Chakravorty BM (1986) graded endometriosis based on the classification suggested by Accosta et al & observed that the highest no. of cases belonged to moderate grade. Infertility in these cases is explained by the extensive tubal & ovarian distortions.

Mage G., Conis M & Pouly J. R. (1986) used the carbon dioxide laser via a second puncture probe during laparoscopy to vaporise endometriotic implants on uterus, bladder & uterosacral ligaments, to divide dense adhesions between ampulla of tube, ovary & over the surface of the ovary & to perform salpingostomy of a hydrosalpinx.

Jayakrishnan K. (1989) performed diagnostic laparoscopy on 362 patients over a 4-year period & assessed laparoscopically patients with long standing infertility, those with suspected pelvic pathology and patients with abnormal HSG findings. He concluded that any evaluation of laparoscopy in cases of infertility must be based on comparison with HSG.

Amarnath, G. Bhide (1990) studied 410 cases of infertility over a 8-year period by laparoscopy & concluded that laparoscopy helps to reveal many fine etiological factors contributing to infertility, in bringing to
light multiple factors acting in consonance & leading to infertility.

Bose Fusey, Deshmukh (1990) correlated findings on HSG & laparoscopy in the investigation of infertility in female partner. They found false negative rate was 10.76%, false positive rate was 26.15% & HSG & laparoscopy were in complete agreement in 64% cases.

*Amenorrhoea*

Steptoe (1965) could establish a diagnosis in all the 22 cases of Amenorrhoea by laparoscopy.

Fear (1968) studied 6 patient of amenorrhea both primary & secondary by laparoscopy. He found hypogonadotrophic ovaries in 3 cases, normal pelvic organs in 1 & testicular feminization syndrome in 1 case. One case with congenital absence of cervix, uterus & proximal position of the tubes were found to have distal portions of the tubes and both ovaries normal on laparoscopy.

Duignan et al (1972) performed 17 laparoscopies to assess the patients of primary amenorrhea & found that patients fell into three distinct groups, gonadal dysgenesis, anatomic anomaly & unstimulated ovaries.

Sykes et al (1972) emphasized the value of ovarian biopsy in assessing the patients of menstrual dysfunction. In a study of 70 ovarian biopsy taken on laparoscopy, they established a correlation between the
state of follicular apparatus & the subsequent clinical progress.

Semchyshyn et al (1976) carried out laparoscopic evaluation of both primary & secondary amenorrhoea. Of the 56 cases of secondary amenorrhoea, 45 were found to have normal organs. While polycystic ovaries were diagnosed in 11 case only 2 cases of primary amenorrhoea were found to have normal pelvic organs while gonadal dysgenesis was present in 6 cases.

Gupta Bina & Taly Anju (1986) studied 100 cases of amenorrhoea which included 48 cases of primary & 52 cases of secondary amenorrhoea. In 55% of the cases of primary amenorrhoea, incomplete development of mullerian tract was the main pathology detected.

Malati L., Sholapurkar (1986) studied 20 cases of primary Amenorrhoea & found ovarian or mullerian development defect to be commonest cause.

Prabhu, Sivaraman, Srinivasan & Rajarathnam (1988) out of 39 patients with primary amenorrhoea subjected to laparoscopy. Mullerian agenesis was seen in 48.7%, streak ovaries in 25.7%, polycystic ovaries in 7.7% & pelvic tuberculosis in 5%

K. C. De & N Biswas (1989) performed diagnostic laparoscopy in 173 cases of primary amenorrhoea & found mullerian abnormality to be the commonest cause (76.30%). In gonadal abnormalities streak gonad was single most common cause i.e. 13.872% & unilateral &
bilateral agenesis combinedly noted in 19.075%. Streak ovary was most commonly associated with aplastic uterus (58.333%).

Chakraborti, Kole (1990) did laparoscopy in 67 cases of primary Amenorrhea & found mullerian agenesis in 18 (27.0%) cases & gonadal dysgenesis in 24 (35.8%) cases. In patients with developmental abnormalities, degree of mullerian agenesis was recorded by them.