

LAPAROSCOPY EVALUATION OF PRIMARY AMENORRHOEA

By

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SUMMARY

Laparoscopic examination were performed in 173 cases of primary amenorrhoea from February, 1983 to February, 1988. Most of the patients were between 20 to 24 years. 6.358% patients presented without any gonadal or mullerian defects. Mullerian abnormality was the most common laparoscopic finding in this series of primary amenorrhoea case i.e. 76.30%. 8.670% had ovarian abnormality without any Mullerian abnormality. Aplasia of the uterus was the common uterine abnormality (32.94%). Hypoplasia of uterus was diagnosed in 9.826%. 25.433% of patients had a mass of tissue at normal position of uterus but without any definite shape of uterus. Streak ovary was the common ovarian abnormality (13.872%). 10.982% and 8.095% of cases were diagnosed to have unilateral and bilateral agenesis of ovary respectively. Normal ovary was found in 46.820%. Underdeveloped ovary was found in 7.514%. Amongst the tubal abnormalities unilateral agenesis and bilateral agenesis were common. Streak ovary was most commonly associated with aplastic uterus i.e. 58.333%. Normal ovary was associated with aplastic uterus in 34.56% and with mass of tissue without any definite shape of uterus in 38.271%. Absence of all internal sex organs i.e. Gonad Mullerian organ were noted in 19.178%.

Introduction

Menstruation is the result of synchronized action of Hypothalamo-Pituitary-Ovario-Uterine axis. In the practice of adolescent gynaecology primary amenorrhoea is one of the frequent complaints. The diagnosis of the cause is very essential to highlight the outcome and proper management. Endocrinological test, and chromosomal test are helpful in predicting the prognosis. Diag-

nostic laparoscopy is the commonest and most essential operative interference in primary amenorrhoea and it is performed all over the world in case of primary amenorrhoea irrespective of the result of the other investigations. The present study is the collective zest of informations obtained by diagnostic laparoscopy from the patients of Primary amenorrhoea, coming to the Eden Hospital, Calcutta Medical College.

Distribution of Case

Patients with complaints of primary amenorrhoea who came to Eden Hospital, Cal-

From: Eden Hospital, Calcutta Medical College, Calcutta.

Accepted for publication on 7-1-89.

TABLE II
Laparoscopic Appearance of Internal Organs

Serial No.	Type	No.	Percentage
1	Absence of tube, ovary and uterus	14	8.092
2	Normal uterus, normal tube and normal ovary	11	6.358
3	Normal uterus, normal tube and abnormal ovary	15	8.670
4	Normal ovary, normal tube and abnormal uterus	69	39.884
5	Abnormal tube, ovary and uterus	63	36.416
6	Normal ovary, uterus and abnormal tube	1	.578
Total		173	

Table III shows the uterine appearance, Aplasia of the uterus was the commonest i.e. 32.94%. In 25.433% cases a mass of tissue found at the normal position of uterus i.e. in between bladder and rectum but without any definite shape of uterus. Hypoplasia of uterus was noted in 9.826%. Unicornuate and Bicornuate uterus with or without hypoplasia were found in 5.202% and 2.312% respectively. Only one case was noted with double uterus. Normal uterus was found in 15.606%. Amongst the ovarian abnormality streak ovary was the most common i.e. 13.872%. Unilateral agenesis and bilateral agenesis were found in

10.982% and 8.095% respectively. Underdeveloped ovary was noted in 7.514% cases. 81 patients (46.820%) amongst the 173 patients had normal ovary with or without corpus luteum and only 5 patients had polycystic ovary (Table IV).

Amongst the tubal abnormality unilateral agenesis and bilateral agenesis were found in 17.919% and 13.294% respectively (Table V).

Table V represents relation of uterine and ovarian appearance. Streak ovary was most commonly associated with aplastic

TABLE III
Appearance of Uterus

Sl. No.	Type	No.	Percentage
1	Hypoplastic	17	9.826
2	Unicornuate with or without hypoplasia	9	5.202
3	Bicornuate with or without Hypoplasia	4	2.312
3	Mass of tissue without any definite shape of uterus	44	25.433
5	Aplastic	57	32.947
6	Double uterus	1	.578
7	Normal	27	15.606
8	Complete absence of gonads and mullerian organs	14	8.092
Total		173	

cutta Medical College, during February, 1983 to February, 1988 were taken into consideration in this study. Total 173 cases were included in this 5 years period. Most of the patients were between 20 to 24 years with maximum 28 years to minimum 13 years. Maximum number of cases were unmarried (60.3%).

Table I shows the annual incidence of that period.

lity. All patients were thoroughly examined clinically with particular interest in noting details of uterus, vagina and adnexa. All the laparoscopic operations were performed under general anaesthesia. Infraumbilical single puncture method was the choice. Vaginal manipulation of uterus were performed in those patients who had well developed cervix and body of the uterus diagnosed on rectal examination. Manipulation

TABLE I

Number of Diagnostic Laparoscopic Operation Performed From February 1983 to February 1988 and Number of Diagnostic Laparoscopic Operation Performed for Primary Amenorrhoea in Eden Hospital, Calcutta Medical College

Serial No.	Year	Total No. of operation	No. of operation for primary amenorrhoea	Percentage
1	1983-84	206	29	14.077
2	1984-85	216	43	19.907
3	1985-86	367	44	11.989
4	1986-87	380	36	9.473
5	1987-88	312	21	6.730
	Total	1481	173	11.681

Material and Methods

Primary amenorrhoea is defined as a failure of onset of menstrual period in a girl at the age of 16 years or beyond. In India average age of menarche is 13 to 14 years (Purandare, 1945). Most of the physicians like to investigate the primary amenorrhoea at the age of 14 years or even earlier if general examination suggests any obvious endocrine abnormality.

Total 173 cases of primary amenorrhoea admitted in Eden Hospital, Calcutta between February '83 to February '88 for diagnostic Laparoscopy were included in this study.

Patients who had reached the age of 16 years or above but had not started menstruation were primarily selected. Cases below the age of 16 years were also included if they had any obvious abnormality.

was performed with movement of cervix without any introduction of uterine elevator in the uterine cavity.

Results

From the laparoscopic study it was noted that only 11 patients (6.358%) were presented without any gonadal and mullerian abnormalities amongst the 179 patients, evaluated in this study. Only 15 (8.670%) patients had amenorrhoea due to the ovarian abnormality inspite of normal mullerian structures. Amongst them 5 had polycystic ovaries, 2 with cystic enlargement of ovary were noted. Mullerian abnormality was the commonest cause of primary amenorrhoea in this study i.e. 76.30%. Complete absence of gonads and mullerian tissues were noted in 14 cases i.e. 8.092% (Table II).

TABLE IV
Appearance of Gonads

Sl. No.	Type	No.	Percentage
1	Cystic enlargement	2	1.156
2	Underdeveloped	13	7.514
3	Streak like	24	13.872
4	Unilateral agenesis	19	10.982
5	Bilateral agenesis	14	8.092
6	Tubo ovarian mass	1	.578
7	Polycystic ovary	5	2.890
8	Normal with or without corpus luteum	81	46.820

TABLE V
Appearance of Fallopian Tube

Sl. No.	Type	No.	Percentage
1	Unilateral agenesis	31	17.919
2	Bilateral agenesis	23	13.294
3	Hypoplasia	6	3.468
4	Segmental absence	14	8.092
5	Normal	85	49.132
6	Complete absence of gonads and mullerian organs	14	8.092

uterus i.e. 14 out of 24 streak like ovary i.e. 58.333%. Underdeveloped ovary found in association of hypoplastic uterus and aplastic uterus in 4 and 6 cases respectively. Unilateral ovarian agenesis was associated with normal and mass of tissue without any shape of uterus in 6 and 5 cases respectively. Bilateral ovarian agenesis was associated with aplastic uterus and mass of tissue without any shape of uterus in 5 cases each.

Discussion

In this study of 173 cases of primary amenorrhea, 76.30% were due to mullerian abnormality and 8.670% cases were found as abnormal ovarian function inspite of normal mullerian structure. Amongst the uterine abnormality aplasia was common in 32.947%. Hypoplasia of uterus was noted in 9.826% and mass of tissue without any

definite shape of uterus was found in 25.433%. Absence of uterus, gonads and tubes were noted in 8.092%.

In ovarian abnormality streak ovary was common i.e. 13.872%. Unilateral and bilateral agenesis were found in 10.982% and 8.09% respectively. In tubal abnormality unilateral and bilateral tubal agenesis were common i.e. 17.917% and 13.294% respectively.

Ramaswamy and Naidu (1966) found faulty Mullerian development, absence of vagina in 16 out of 54 cases i.e. 29.52% of Primary amenorrhoea. Vaidya *et al* (1982) found faulty mullerian development was the cause of primary amenorrhoea in 22.01% cases.

Gut *et al* (1978) conducted a study in 207 primary amenorrhoea patients and found

TABLE VI
Laparoscopic Appearance of Ovary and Uterus

Gonadal Appearance	No.	Uterine Appearance						Double uterus
		Hypo- plasia	Unicornuate with or without Hypoplasia	Bicornuate with or without hypoplasia	Mass of tissue without any Def- inite shape of Uterus	Normal	Aplasia	
Underdeveloped	13	17	9	4	44	27	57	1
Streak like	24	4	2	1	1	1	6	
One ovary	19	5	3	1	2		14	
Absence of both ovaries:	14	1	2	1	5	6	4	
Normal ovary	81	7	2	1	5		5	
Tubo ovarian mass	1				31	12	28	
Polycystic ovary	5					1		
Cystic enlargement	2					5		
Absence of ganadas & mullerian structures	14					2		1

gonadal dysgenesis was the most common defects i.e. 33.18% and Mullerian abnormality was next common i.e. 25.34% and absence of ovary, uterus and fallopian tube were noted 4 patients i.e. 1.932%.

Chakrabarty (1979) observed that development defects of uterus was the most common cases of primary amenorrhoea i.e. 77%.

In a series Vaidya *et al* (1972) pituitary ovarian failure including cases of ovarian insufficiency or agenesis was responsible for amenorrhoea in 31 out of 109 cases i.e. 28.440% they could not crystalize their view due to insufficient investigation facilities. Vaidya *et al* found faulty mullerian development was the cause of primary amenorrhoea in 22.01% of cases.

In a study conducted by Chandrawati (1987) noted mullerian duct abnormality was the most common cause of amenorrhoea. In her study she noted that 75% of patients had mullerian abnormality. Mullerian duct atresia was the commonest i.e. 62.5% and gonadal dysgenesis was noted in 9.4% of patients.

The study also favours the higher incidence of mullerian abnormality. Aplasia and without definite structure of uterus were common.

Conclusion

(a) Mullerian abnormality was the common cause of primary amenorrhoea i.e. 76.30%.

(b) Ovarian abnormality noted in 8.670% inspite of normal mullerian structure.

(c) Absence of uterus, tube and ovary were noted in 8.092%.

(d) Amongst the mullerian abnormality uterine aplasia and mass of tissue without

definite shape of uterus were found in 32.94% and 25.435% respectively.

(e) In gonadal abnormality streak gonad was singlemost common cause i.e. 13.872% and unilateral and bilateral agenesis combinedly noted in 19.075%.

(f) Streak ovary was most commonly associated with aplastic uterus (58.333%).

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