

## A CLINICO - PATHOLOGICAL STUDY OF ADENOMYOSIS

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### SUMMARY

Adenomyosis was present in 67 (31%) of 320 consecutive hysterectomies performed over a period of three years. Adenomyosis was uncomplicated in 27 cases (40.30%) and coexisted with other pelvic pathology in 40 (59.70%) cases. Most patients were 40 to 50 years of age, multiparous, had not received steroids and had no prior abdominal surgery. Commonest symptom of menorrhagia was encountered in 55% of uncomplicated group and 60% of complicated group. Metrorrhagia was present in 33.33% and 40.00% patients while dysmenorrhoea was seen in 11.10% and 22.50% cases respectively in the two groups. Leiomyoma uterus was the commonest coexisting disease present in 38.5% of cases while endometrial hyperplasia was seen in 14.9% of cases of complicated adenomyosis. Pre-operative diagnosis of adenomyosis was made in only 6% of total cases.

### INTRODUCTION

About 20% of all surgically removed uteri, irrespective of the preoperative diagnosis, demonstrate adenomyosis (Bird et al, 1972). More often, it is an incidental pathological finding in a uterus removed for a more obvious diagnosis.

Present retrospective study was carried out to know the incidence of adenomyosis in Haryana.

### MATERIAL AND METHODS

The present data was derived from case sheets

of 320 consecutive hysterectomies done for various indications in Gynaecology Department Unit-II of Medical College and Hospital, Rohtak, Haryana during a period of three years from 1st January 1986 to 31st December, 1988. Adenomyosis was reported in 67 patients on histopathological basis. The histologic criterion for adenomyosis at this hospital is the presence of endometrial glands and stroma within the myometrium beyond one low power microscopic field from the endomyometrial junction. Routine sampling of the grossly normal appearing body of uterus consists of two tissue blocks prepared from anterior and posterior uterine walls. Pa-

tients of adenomyosis were categorised into two groups. First group was of patients with uncomplicated adenomyosis and no other pelvic disease. Here it is reasonable to attribute the signs and symptoms to adenomyosis. In the second group, adenomyosis was associated with some other pelvic disease where symptoms could be explained by the coexisting disease. This group was labelled as complicated adenomyosis.

### RESULTS

During a period of three years, out of 320 hysterectomies performed, adenomyosis could be seen histologically in 67 patients making an incidence of 21%. Adenomyosis was complicated in 40 cases (59.70%) and uncomplicated in 27 cases (40.30%). Characteristics of the patients are shown in Table I.

**Age :** Age ranged from 30 to 70 years with a mean of 48.5 years. Majority of the patients (67%) were in 40-50 years of age group. Only 15% patients were between 30 to 40 years and 18% in more than 50 years of age group. There

was no significant difference of age in the two groups.

**Parity :** Parity ranged from 0 to 8 with mean of 3.9. Menstrual parity was almost same in the two groups. Majority of the patients (55.2%) were para 5 and above. There were only 2 nullipara in complicated group and 1 in uncomplicated group. 19% of the patients were menopausal while rest were in their reproductive age.

#### Socio-economic status

A total of 31 patients (46.3%) belonged to low socio-economic status while 36 (53.7%) were from high socio-economic status.

27 patients (40%) belonged to rural areas and rest (60%) came from urban areas.

#### Type of hysterectomy

Out of 67 total cases of adenomyosis in hysterectomies, 54 (80.6%) were done by abdominal route and 13 (19.4%) by vaginal route.

**Symptoms and signs -** The relative occurrence of symptoms in women with uncomplicated and complicated adenomyosis did not differ much as shown in Table -II. Menorrhagia the

TABLE I  
Showing characteristics of patients

Total hysterectomies	320	
Adenomyosis	67	Abdominal Hysterectomy 54 (80.6%) Vaginal Hysterectomy 13 (19.4%)
Incidence	21%	
Complicated	40	(59.70%)
Uncomplicated	27	(40.30%)
Range of age	30 to 70 years	
Mean age	48.5 years	
Range of parity	0-8	
Mean parity	3.9	
Lower socio-economic status	31	(46.3%)
Higher socio-economic status	36	(53.7%)
Rural	27	(40%)
Urban	40	(60%)

**TABLE II**  
Showing frequency of symptoms in two groups of adenomyosis.

Symptoms	Uncomplicated		Complicated	
	No.	%	No.	%
Menorrhagia	15	55.85	24	60.00
Metrorrhagia	9	33.33	16	40.00
Dysmenorrhoea	3	11.10	9	22.50
Postmenopausal bleeding	-	Nil	6	15.00
Mass in abdomen	-	-	9	22.50
Total No. of patients	27	40.30	40	59.70
Discharge per Vaginum	4	14.80	6	15.00

\* Some patients had more than one symptom.

commonest symptom was seen in 55.55% of uncomplicated group and 60.00% in complicated group of adenomyosis. Metrorrhagia was the second commonest symptom and was in 33.33% and 40.00% cases respectively of non complicated and complicated adenomyosis, a difference which was not statistically significant ( $p > 0.01$ ).

Dysmenorrhoea was twice more common in complicated adenomyosis (22.50%) than in uncomplicated adenomyosis. (11.10%)

Mass in abdomen was seen in 9 patients (22.5%) of complicated group only. Postmenopausal bleeding was seen in none and 15.00% cases respectively in uncomplicated and complicated groups.

8 patients (11.8%) (4 in each group) had normal menstruation. There was prolapse uterus in 12 cases (19.04%) without any menstrual symptom. Discharge per vaginum was seen in 14.8% and 15.00% cases respectively in the two groups. There was cervical erosion in 3 cases and

**TABLE III**  
Showing diseases associated with complicated adenomyosis.

S. No.	Disease	No. of cases	Percentage of total cases
1.	Leiomyoma uterus	26	38.5
2.	Ovarian tumour	3	4.4
3.	Carcinoma cervix in situ	1	1.5
4.	Endometrial hyperplasia	10	14.9

cervical polyp in 2 cases.

Uterus was antverted in 51 (76.30%) cases and retroverted in 16 (23.7%) cases. Clinical enlargement of uterus was seen in 33 cases (48.25%) out of which 10 cases (14.9%) were more than 12 weeks in size and 10 cases (14.9%) were 10-12 weeks in size. 15 patients had normal sized uterus (22.3%) while 19 (23.3%) had multiparous uteri.

Uterus was firm in consistency in 54 patients (80.59%) while it was irregular in 13 (19.41%). Uterine tenderness was recorded in 9 patients only of complicated group.

#### Complicated Adenomyosis

In the 67 women of adenomyosis, 40 had associated pathology (59.70%) (Table III). Leiomyoma of uterus was the commonest association and was present in 26 cases (38.5%), ovarian tumour was present in 3 cases (4.4%) Carcinoma cervix in situ in one case (1.5%) while endometrial hyperplasia was seen in 10 cases (14.9%)

#### Pathology

The normally situated endometrium was consistent with the phase of cycle at the time of surgery. Proliferative phase was seen in 89% cases, secretory phase in 5.9% and atrophic endometrium in 4.4% cases. Endometrial hyperplasia was found in 10 cases (14.9%), myohyperplasia in 8 cases (11.8%) and localised adenomyoma in 5 (7.9%) cases.

#### DISCUSSION

During a period of three years, adenomyosis was found by routine pathological examination in 21% of the consecutive hysterotomies done in this hospital, which is the only medical college in the State. In retrospective studies from the United States, quoted by Emge (1962) and Molitor (1971), the incidence of adenomyosis uteri was 8 to 29%. Owolabi and Strickler (1976), however, found an incidence of only 10% in unselected hysterectomies in Canada. Bird et al (1972) examined 200 consecutive hysterectomy specimens and found adenomyosis in 31%. Their

incidence increased further to 61.5% when six further tissue blocks from designated sites were examined in addition to routine samples. Adenomyosis, therefore, may be a more common finding than most reports suggest. Our incidence of 21% is in between the two studies.

A total of 40 patients (59.70%) had some associated complication like leiomyoma, various tumour and endometrial hyperplasia. Menorrhagia was the commonest symptom in the present study being 55.55% in uncomplicated adenomyosis and 60.00% in complicated adenomyosis which was comparable to the overall incidence of 51.2% quoted by Bird et al (1972).

Menorrhagia was seen in 33.33% and 40.00% cases respectively in the two groups, while Bird et al (1972) found it in 10.9% cases only. Owolabi and Strickler (1976) found abnormal uterine bleeding in 65% cases of uncomplicated group and 62% cases in complicated group.

Post menopausal bleeding was seen in 6 (15.00%) cases of complicated adenomyosis in contrast to 2.2% by Bird et al (1972). It could be due to associated complications, cause of intramural extension of the endometrium and development of adenomyosis uteri is unknown. A history of previous surgery on uterus which could transplant endometrial cells in the myometrium was very infrequent in the present study and was seen in only 3 cases.

A total of 59.70% patients in this study were complicated by leiomyomas, carcinoma cervix in situ, ovarian tumour or endometrial hyperplasia which has also been reported by other authors. (Benson and Sneed, 1958, Bird et al 1972; Emge, 1962; Molitor, 1971 and Kilker et al, 1984).

Age distribution, parity, socio-economic status of the present study is similar to other reports (Benson and Sneed, 1958 and Israel and Wouteraz 1959).

However, preoperative diagnosis of adenomyosis was suspected in only 6% cases and uterus was tender in only 3 cases (4.47%). Owolabi

and Strickler (1976) could also make a preoperative diagnosis in 10% cases only.

Emge (1962) recognised adenomyosis clinically in 66.5% of women and the surgical pathologist diagnosed adenomyosis in 67% of the gross specimens in Benson and Sneed's (1958) review.

Adenomyosis appears to be an uncommonly considered diagnosis, pelvic examination rarely detected the classic signs of an enlarged tender uterus and gross appearance of this process at operation is also unrecognised many times.

Adenomyosis, a neglected diagnosis, is the only finding in some women usually middle aged and parous, whose symptoms of abnormal uter-

ine bleeding and pelvic pain have prompted hysterectomy. Adenomyosis should be thought of more commonly as a diagnosis in abnormal uterine bleeding and dysmenorrea in middle aged parous women.

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DISCUSSION

During a period of three years, adenomyosis was found by routine pathological examination in 21% of the consecutive hysterectomies done in this hospital, which is the only medical centre in the State. In comparison with other studies from the United States, quoted by Emge (1962) and Moller (1971) the incidence of adenomyosis here was 8 to 29%. Ovarian and uterine (1976) however, found an incidence of only 10% in hysterectomies in Canada. Bird et al (1972) examined 200 consecutive hysterectomy specimens and found adenomyosis in 31%. Their

...associated pathology (Table III). Endometriosis of uterus was the most common associated pathology and was present in 28 cases (44.8%). Ovarian tumour was present in 2 cases (4.9%). Carcinoma cervix in situ in one case (1.7%). While endometrial hyperplasia was seen in 10 cases (14.3%). Pathology. The normally situated endometrium was consistent with the phase of cycle at the time of surgery. Endometrial phase was seen in 85% cases, secretory phase in 25% and atrophic endometrium in 4.9% cases. Endometrial hyperplasia was found in 10 cases (14.3%). Myoepithelium in 8 cases (11.8%) and leiomyoma in 2 (2.9%) cases. A total of 29.70% patients in this study were complicated by leiomyoma, carcinoma cervix, leiomyoma, ovarian tumour or endometrial hyperplasia which has also been reported by other authors (Benson and Sneed, 1958; Bird et al, 1972; Emge, 1962; Moller, 1971 and Kilker et al, 1984). Age distribution, parity, socio-economic status of the present study is similar to other reports (Benson and Sneed, 1958 and Israel and Wouteruz, 1959). However, preoperative diagnosis of adenomyosis was reported in only 6.7% cases (Owolabi et al, 1984).