ADENOMYOSIS (ADENOMYOMA) UTERI

BY

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Adenomyosis in India is not quite as rare a condition as it was presumed to be. The facts that led to this conclusion were first due to the limited number of cases that have been reported and secondly to the prevailing customs where every woman is expected to be married by a certain age.

Definition and General Characters.

Novak is of the opinion that adenomyosis of the uterus is a benign invasion of the endometrium into the uterine musculature. This is generally associated with a diffuse overgrowth of the muscle fibres. Adenomyosis is not a tumour in the proper sense of the word any more than is endometriosis. So, it is a better term than adenomyoma. It is not infrequently spoken of as endometriosis interna or uterina to distinguish it from endometriosis externa or pelvic endometriosis. It differs from the latter in that the impulse responsible for abnormal endometrial growth propensity, whatever it may be, affects the uterine musculature as well, whereas in pelvic endometriosis, only endometrium is usually concerned, though occasionally some muscle tissue may be present.

Implantation and Serozal Theories.

Gold and Kearns in reporting cases of cystic adenomyosis summarise the theories as follows:

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1. Cullen and Frankl postulated a theory of direct invasion of the uterus by normal endometrium, the stroma of ectopic islands from the mucous membrane prepares the way for glands to follow. The most aggressive types of adenomyosis are these with a very cellular stroma.

2. Cullen. The islands of ectopic endometrium represent misplaced remnants of the Mullerian duct epithelium.

3. Von Recklinghausen and Phannanstiel. The epithelium originates from the mesonephric tissue of the Wolffian duct.

4. Iwanoff and Novak. Adenomyosis arises from the activation of celomic rests.

5. Meyer. Adenomyosis arises from undifferentiated or basal cells dependent on an inflammatory or hormonal stimulus.

6. Adenomyosis is a result of the foetal budding of epithelium or represents misplaced islands of foetal mucosa.

7. Halban, Bestnor. Adenomyosis is a result of lymphatic or hematogenosic spread of endometrium.

8. Brines & Blain. Adenomyosis was a result of spontaneous generation of endometrial stromal or interstitial cells from and within the myometrium; to this may be added Sampson's well known theory.

9. Sampson. Transplantation. Endometrial tissue set free during menstruation may continue to grow if transported to a favourable environment.

Symptoms.

The cardinal symptoms are dysmenorrhoea, menorrhagia and metrorrhagia. Graves states that dysmenorrhoea is a somewhat more distinctive symptom than in the case of fibroids. It is probably aggravated by the increased tension within the tumour due to menstruation in the pervading endometrial tubules.

Spatt, in a series of adenomyosis, reports metromenorrhagia 56% and dysmenorrhoea 29%, both together were present in 17% and backache in 3%.

Jeffcoate and Potter and Dreyfuss also report that dysmenorrhoea is much less frequent in adenomyosis uteri than excessive irregular bleeding.

26 cases were reviewed by me. The symptoms were as under:—

TABLE I
Symptoms

Menorrhagia	10
Dysmenorrhoea	9
Menorrhagia and Dysmenorrhoea combined	6
Menorrhogia with backache ..	1
Total ..	26

Age.

To quote Spatt again—"Cullen, Westman, Jeffcoat and Potter, Rockstroh, Dreyfuss and Frankl, all agree that the greatest number of cases of adenomyosis uteri occur in the fifth decade."

TABLE II
Age incidence—Adenomyosis

Age	22-30	31-40	41-50	51-60
Number	3	15	8	—

The age of incidence in adenomyosis, I find, is higher than in endometriomata of the ovaries, being between the ages of 30-50. The oldest was 49 and the youngest 22 years. Dreyfuss found the average age of his cases of adenomyosis uteri to be 46 years, while that of endometriosis to be 33 years. The youngest case reported by Holden was in a girl of 14. Her symptoms began 6 months after the onset of menstruation with severe dysmenorrheoa. The adenomyosis was within a definite fibroid. Spatt is of opinion that this case would argue against those who believe that repeated child birth or abortions play a role in the genesis of adenomyosis.

Parity.

The following table gives the incidence of parity in cases of adenomyosis and endometriosis.

TABLE III
Parity in adenomyosis (26 cases)

Nullipara	1	2	3	4	5	6-10
12	4	4	3	1	1	1

Of the above series, only one was unmarried, all the rest being married.

TABLE IV
Parity in endometriosis (56 cases)

Nullipara	1	2	3	4	5	6-10	
26	3	7	7	2	3	4	4

Of 26 nulliparæ, three were unmarried, two were cases of endo-

metriosis ovarii, and one, a case of endometriosis uteri.

Meigs believes that delayed marriage, lack of early and interrupted child bearing and consequent persistent and un-interrupted menstrual cycle are conducive to the development of endometriosis, particularly in the higher social and economic levels, where delayed child bearing and endometriosis are most common. The two unmarried nulliparas with endometriomata ovarii were 21 and 22 years of age. The third unmarried case was aged 35 with endometriosis of the uterine cavity, while the remaining 23 cases were women who were married early in life within the second decade and anxious to conceive. So, this disproved Meig's theory of lack of early marriage. Sampson found that sterility was due to dyspareunia, menorrhagia, metrorrhagia and similar complaints.

Association of Adenomyosis and Endometriosis.

In my series of 56 cases of endometriosis, there has been a period of interrupted conception ranging from 6-10-20 years in poor women who had 3-6 children; one who had 5 children and several abortions started irregular bleeding off and on during the last 2-3 months before admission into hospital. This bleeding commenced two years after the menopause. There was proliferation of glands with no secretion in them. The glands were regular, and infiltrated in places by a large number of small round cells. There was no evidence of malignancy.

Another case, age 36, had 3 children, the last child was 12 years old, husband alive; she complained of dysmenorrhea of one year's duration. There was pain radiating down the thighs. The uterus was found densely adherent posteriorly, irregularly enlarged to about 14 weeks' pregnancy, more on the left than on the right; tubes distended, occluded and bound down by adhesions to ovaries and posterior pelvic wall. Subtotal hysterectomy was performed with bilateral salpingo-oophorectomy. The pathological report was "Fibromyoma of the uterus" showing a whorled appearance and containing a few scattered islands of endometrium. On sectioning the uterus, it was found that there was no definite isolated fibromyoma, but that it was a real case of adenomyosis.

The third case had 2 children, the last was 8 years old. The uterus was slightly enlarged, the left adnexa densely bound down by adhesions to the pelvic colon. Salpingo-oophorectomy with resection of right ovary and subtotal hysterectomy was done. A small area of endometrial glandular tissue without muscle stroma was found lying just under the peritoneum.

A fourth case in this series was aged 40, married 20 years, had ten full term normal deliveries, her last abortion was three months prior to her admission into hospital for continuous and profuse bleeding. The uterus was enlarged to the size of 10 weeks' pregnancy, the external os was patulous, adnexa normal. Endometrial biopsy showed adenomyosis of the uterus. Owing to other associated conditions in the pelvis, it is not always easy to ascertain the lesion—whether due to endometriosis, inflammation or neoplasms. Ute-

rine adenomyosis figures vary widely in all types of endometriosis. Smith found it to be 34%, Hill 15%, Cattell and Swinton 21%, Counsellor 69.9%, Payne 6.5%, in my series I found it was 39%.

Other Associated Conditions.

TABLE V

Associated pathological conditions

Endometrioma ovary plus recto-vaginal septum	1
Luteal cyst	1
Bicornuate uterus	1
Fibroid	21
Fibroid with stromatus endometrium	1
Salpingitis	1

Fibromyomas, endometriosis and adenomyosis are frequently found in the same patient suggesting that they may have the same etiology. They all develop in women during the menstrual phase of life.

Sampson suggested that fibroids may represent the irritated reaction to a preceeding endometriosis. Adenomyosis with endometrial tissue in centre of a myomatous nodule is highly suggestive of such a theory.

Complications Associated With Pregnancy.

Rupture of the uterus was the most frequent complication due to adenomyosis perhaps due to weakening of the muscle wall by decidual reaction in islands of endometrial tissue and invaded deeply by chorionic villi. The next most frequent complication was uterine inertia and postpartum haemorrhage.

Adenomyosis as the cause of abortions and miscarriages should be considered. In my series, there was a case with a history of 20 abortions. On speculum examination, a small bluish cyst was found on the anterior surface of the cervix, size of a split pea, and about ¼" above the external os. On digital examination, it was felt like a nodule, the result of trauma caused by a volsellum forceps. The cyst was of endometrial origin.

Hill describes a uterine growth which resembles adenomyoma, but which does not contain glands. "Fibromyosis uteri, endometrial type," the connective tissue growth, is endometrial in character. In 1920 Casler described this case as one of adenomyosis with stroma but no glands. Stromal endometriosis, unlike adenomyosis, may continue to grow after the cessation of ovarian function. Henderson calls this endolymphatic stromal myosis.

Summary.

1. 26 cases of adenomyosis uteri are reported.
2. Their symptomatology, age and parity incidence are discussed and compared with cases of endometriosis.
3. It is noticed that early marriage does not preclude the incidence of adenomyosis and endometriosis.
4. Illustrative cases are given showing the common association of adenomyosis with endometriosis.
5. Fibroids are a common accompaniment of adenomyosis.
6. Possibility of rupture uterus, uterine inertia, post-partum haemorrhage and frequent abortions, as a result of adenomyosis associated with pregnancy, is suggested.

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