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THE SIGNIFICANCE OF PAIN IN LEIOMYOMA WITH ADENOMYOSIS AND LIOMYOMA WITHOUT ADENOMYSIS

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Abstract:

The pain represented as dysmenorrhea, dyspareunia and pelvic pain, which are common symptoms to leiomyoma and adenomyosis since these two disorders frequently occur concurrently. The study aimed to compare women undergoing hysterectomy with a pathological finding of both leiomyoma and adenomyosis to women with leiomyoma alone in relation to the clinical symptom of pain. identifying adenomyosis in women with leiomyoma will allow improved clinical decision-making regarding alternative to hysterectomy and likely a decreased risk of treatment failure. Methods: A retrospective study done at Salesi-hospital ANCONA (ITALY), The data collected from the patient files from January -2012 to December -2012. All operated patients for leiomyoma by hysterectomy was included. Result Our study sample comprised of 97 cases operated for leiomyoma by hysterectomy. From the 97 cases, there were 90 cases of leiomyoma without adenomyosis and 7 cases of leiomyoma with adenomyosis. Conclusion the pain is an important symptom of both leiomyoma uterus alone or leiomyoma with adenomyosis but present more in leiomyoma with adenomyosis in women undergoing hysterectomy, the pain commonly present more in patient with adenomyosis with leiomyoma and correlate in high percentage to the presence of adenomyosis on histopathological examination of specimen, so in cases of leiomyoma uterus adenomyosis must be expected as this affect the line of treatment.

Key words: Hysterectomy**,** Leiomyoma**,** Adenomyosis**,** Pain.

Introduction

At least 25% of premenopausal women have uterine fibroids, which are a very common type of non-cancerous growth. The two most prevalent gynecologic conditions in women of reproductive age are leiomyoma or fibroid and adenomyosis. Uterine leiomyomas are benign monoclonal tumors that primarily develop as a result of myometrial smooth muscle cell proliferation. Adenomyosis is a benign condition marked by invasion of the myometrium by the endometrium, which means the presence of ectopic endometrium outside of its usual location lining the endometrial cavity. It is linked to uterine enlargement and histological examination reveals ectopic, non-neoplastic endometrial glands and stroma surrounded by hypertrophic myometrium [1]. In premenopausal women, uterine leiomyoma and adenomyosis are both prevalent gynecological conditions that may necessitate hysterectomy. Uterine leiomyomas can either be asymptomatic or show symptoms. If they are large enough, they can push on the urinary tract and result in a variety of symptoms, including abnormal uterine bleeding, persistent pelvic pain, and urinary problems [2]. Since leiomyoma and adenomyosis frequently coexist, they cannot be clearly separated by symptoms alone. Adenomyosis, which typically affects multiparous women, can cause discomfort that is expressed as dysmenorrhea, dyspareunia, pelvic pain, or menorrhagia [3]. which are typical symptoms of leiomyoma and adenomyosis because these two conditions frequently coexist, it is difficult to tell them apart by their symptoms alone [4,5]. Despite the fact that the symptoms of leiomyoma and adenomyosis have been largely identified, comparative research on the symptoms of these conditions when present separately and concurrently have been done very infrequently. Accordingly, this study aimed to examine clinical characteristics and symptoms by dividing hysterectomy patients into two groups based on histology outcomes: concurrent leiomyoma and adenomyosis group and leiomyoma only group. According to Walker & Stewart (2005) [6], uterine leiomyomas (fibroid or myoma) are the main reason for hysterectomy in the United States. They are benign myometrial neoplasms. Adenomyosis is a myometrial lesion characterized by the presence of ectopic endometrium with or without hyperplasia of surrounding myometrium. Furthermore, Adenomyosis and leiomyomas frequently coexist; the percentage of women with simultaneous adenomyosis in hysterectomy specimens with leiomyomas ranged from 15 to 57% [7].

Age, multiparity, surgical endometrial and myometrial border disturbances, high FSH and prolactin levels, smoking, and a history of depression are risk factors for adenomyosis (Parazzini et al., 1997, 2009; Taran et al., 2009) [8]. Leiomyomas have been linked to a number of symptoms, including painful or heavy periods, pelvic discomfort, bowel and urinary system issues, and heavy menstruation. Similar to menstrual pain, chronic pelvic pain, and abnormal uterine bleeding, symptoms of adenomyosis are frequently reported. However, since both conditions frequently coexist in the same uterus, it can be difficult to attribute symptoms to either condition. In addition, since adenomyosis is typically diagnosed only at the time of hysterectomy, the disease's contribution to the symptoms can only be understood retrospectively (Weiss et al, 2009) [9].The (MRIGFus) magnetic resonance guided - focused ultra sound and uterine artery embolization are reported as safe and effective minimally invasive therapies for symptomatic uterine leiomyoma [10].The likelihood of both treatments failing appears to be higher when concurrent adenomyosis is present [11].

The design of the current study aims to compare women undergoing hysterectomy with a pathological finding of both leiomyoma and adenomyosis to women with leiomyoma alone in relation to the clinical symptom of pain identifying adenomyosis in women with leiomyoma will allow improved clinical decision-making regarding alternative to hysterectomy and likely a decreased risk of treatment failure.

Methods

A retrospective study done at Salesi-hospital ANCONA (ITALY) review of records from the files of the patients which operated for leiomyoma uterus by hysterectomy. The study was approved by the Ethical Committee at the hospital.

The data collected from the patient files from January -2012 to December -2012
All operated patients for leiomyoma by hysterectomy in this year was included, review of the pain symptoms and the histopathological examination of uterus specimen after hysterectomy for presence of adenomyosis was done. The cases divided into two groups: cases of leiomyoma alone, cases of leiomyoma with adenomyosis by the histopathological examination. Comparison of pain in both groups was done as a presence of any type of pain dysmenorrhoea, pelvic pain, and dyspareunia.

Results

Our study sample comprised of 97 cases operated for leiomyoma by hysterectomy. The symptom of pain searched for from every patient's file for all the 97 cases. The histopathology report for every patient's file also reviewed for the presence of adenomyosis in each specimen. The cases divided into 2 groups, cases of leiomyoma only and cases of leiomyoma with adenomyosis, and the pain studied in both groups.Pain either as pelvic pain, dysmenorrhoea or dyspareunia.
From the 97 cases, there were 90 cases of leiomyoma without adenomyosis and 7 cases of leiomyoma with adenomyosis.
The symptom of pain reviewed in every case from the patient's file there were 38 cases from the 90 cases of the first group which is the group of leiomyoma without adenomyosis have pain which represent 36.86% from the all cases and 42.2% from the first group which 90 cases of the leiomyoma only group.
There were 7 cases of the second group which is leiomyoma with adenomyosis 4 of which have pain which represent 57% of cases and of the second group.
The results are plotted in tables as shown

Table (1): This table shows the total number of cases in the year of study 2012 and number of cases in each group.

Total number of leiomyoma operated by hysterectomy	only leiomyoma (G-I)	leiomyoma with adenomyosis (G-II)
97 cases	90 cases	7 cases

Table (2): show percentage of the cases in two studied groups from the total cases.

Cases of leiomyoma only (group I)	Percentage from total cases	Leiomyoma with adenomyosis (group II)	Percentage from total cases
90 cases	92.8%	7 cases	7.2%

The first group (G-I) which is leiomyoma only are 90 cases of the total 97 cases represent 92.8%. The second group (G-II) which is leiomyoma with adenomyosis which 7 cases from the 97 cases were which represent 7.2% of the total cases.

Table (3): show the percentage of pain in both groups.

Cases of leiomyoma only which had pain (G-I)	Percentage %	Cases of leiomyoma with adenomyosis which had pain (G-II)	Percentage %
38 cases from 90 cases	42.2%	4 cases from 7 cases	57.1%

The pain Present in percentage of 42.2% in cases of leiomyoma only and in 57.1% in cases of leiomyoma with adenomyosis.

Table (4): show types of pain that present and its percentage in each group

	Leiomyoma without adenomyosis (G-I)	**Leiomyoma with adenomyosis (G-II)**
Painful menses dysmenorrhea	10 (11.1%)	4 (57%)
Dyspareunia	10 (11.1%)	4 (57%)
pelvic pain	18 (20%)	4 (57%)

Pain in cases of leiomyoma with adenomyosis is dysmenorrhoea and dyspareunia in leiomyoma cases
without adenomyosis also pain is present but more as pelvic pain.

Discussion

Uterine leiomyomas are often Asymptomatic, but may cause abnormal uterine bleeding including menorrhagia, chronic pelvic pain and urinary symptoms such as urinary frequency, urinary urgency or nocturia and others [13]. The symptoms depend on site, size of leiomyoma and any degeneration changes in it. The diagnosis of leiomyoma is usually determined by pelvic examination and imaging tests, such as pelvic U.S.S and magnetic resonance imaging. A symptomatic leiomyoma are typically observed with serial follow up, while symptomatic leiomyomas can be managed by drug therapy using a hormone- releasing intra uterine device, interventions such as uterine artery embolization, and surgical modalities such as myomectomy or hysterectomy [14]. the most common symptoms of adenomyosis are dysmenorrhoea, dyspareunia, chronic pelvic pain and abnormal uterine bleeding. Patients of these symptoms can be suspected of having adenomyosis and often undergo hysterectomy. Drugs, interventional or surgical management can be attempted for patients with adenomyosis even though sex hormones, progestins, danazol, and gonadotropin releasing hormone can help alleviate dysmenorrhoea. Several controlled studies have shown that no drug has inhibit the development of adenomyosis [15,16]. In the current study the pain was Present more in the group of leiomyoma with adenomyosis(G2) 57.1% Dysmenorrhoea and dyspareunia and pelvic pain are also present more in the second group , this suggests that presence of adenomyosis with leiomyoma is a contributing to symptomatology which leads to hysterectomy consequently in women with symptoms that seem disproportionate to the level of leiomyoma disease, F. Andrei Taran et-al found that a Women undergoing hysterectomy with both adenomyosis and leiomyomas have a number of different clinical features compared with women with only leiomyomas at the time of hysterectomy, Women with substantial pain despite a smaller fibroid burden may be more likely to have concomitant adenomyosis[17]. UAE studies reported pelvic pain in up to 20% of the participants (Pron et al., 2003; Edwards et al., 2007) [18,19]. Furthermore, a previous population-based study showed that pelvic pain and dyspareunia increased in severity in women with leiomyomas compared with women without leiomyomas; however, consistent with these reports, we found, in the group of women with only leiomyomas, approximately one-fifth of women reporting non-cyclical pain. The proportion is, however, doubled in the group with adenomyosis and leiomyomas and the difference is significant in the multivariable model. These findings suggest that chronic pain is present in some women with leiomyomas but enlarged in women with both diseases.

Conclusion

Co-existence of the two diseases exhibits mixed symptoms of each disease but show different tendency. The pain is an important symptom of both leiomyoma uterus alone or leiomyoma with adenomyosis but present more in leiomyoma with adenomyosis women undergoing hysterectomy. the pain commonly present more in patient with adenomyosis with leiomyoma and correlate in high percentage to the presence of adenomyosis on histopathological examination of specimen, so in cases of leiomyoma uterus adenomyosis must be expected as this affect line of treatment, further study on large cohort, prospective study is needed.

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Conflict of Interest

There are no financial, personal, or professional conflicts of interest to declare.

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