Research Journal of Medical Sciences 12 (1): 1-4, 2018
ISSN: 1815-9346

Adenomyosis: Prevalence, Clinical Characteristics and Histopathological Findings of Hysterectomy among Yemeni Women at 48 Medical Model Hospitals

[1]Nagi A. Al-Haj, [2]Muna A. Ghoshim, [2]Nagham Farouq and [3]Yaser Abdulmughni
[1]Department of Medical Microbiology, Faculty of Medicine and Health Sciences,
Sana'a University, P.O. Box 13078, Sana'a, Yemen
[2]Department of Obstetrics and Gynecology,
[3]Department of Surgery, 48 Model Hospital, Sana'a, Yemen

Abstract: Adenomyosis, a common non-malignant condition of the uterus is characterized by the presence of ectopic endometrium with or without hyperplasia of the surrounding myometrium endometrial glands as well as stromal elements situated at least 2.5 mm below the endomyometrial junction. To study adenomyosis prevalence among Yemeni women in Sana'a City as the cause of abnormal uterine bleeding in hysterectomy specimens. Retrospective study was retrieved 73 women consecutive undergoing hysterectomy in a 2 years, 2011-2013 with a histologic diagnosis of adenomyosis with regards to the clinical profile. The prevalence rate of adenomyosis among Yemeni women was 28.7% while 80% of the patients were seen in the age group of 31-50 years, menorrhagia 87.5%, dysmenorrhea 81.7%, lower abdominal pain 85.5% beginning later in reproductive life (mean age 39 years) and 95.4% of the patients were multiparous of the classic presentation. We concluded the adenomyosis rate of this study was found to be the most common cause of abnormal uterine bleeding in Yemeni women of perimenopausal age group.

Key words: Hysterectomy, adenomyosis, menorrhagia, histopathology, Yemen, perimenopausal age

INTRODUCTION

Adenomyosis known as an abnormal uterine bleeding is a common cause for women in the reproductive age group to consult a doctor. Abnormal uterine bleeding is also the common cause for iron deficiency anemia in our country, especially in the reproductive age group. Uterine fibroid, adenomyosis, polyp (endometrial and endocervical), endometrial hyperplasia and malignancy are the structural causes for abnormal uterine bleeding. Usually adenomyosis is diagnosed mainly after hysterectomy pathologically, although, MRI is becoming more common (Bhosle and Fonseca, 2010). The prevalence has been reported to range from 5-70% in women at the time of hysterectomy (Dueholm, 2006). Various reports have outlined the appearance of symptomatic endometrial tissue in the abdominal wall following amniocentesis and pelvic surgery, especially, following caesarean study. This phenomenon has been explained by implantation during surgery, followed by the embedding and survival of the ectopic endometrium. When present, these symptoms lead to a presumptive preoperative diagnosis of adenomyosis and are often indication of hysterectomy. Since, the uterus is a hormonally responsive organ, hormones (oral contraceptive pills, progesterone pills, gonadotrophin hormones, progesterone intrauterine device) are the main stay of medical treatment of symptoms (Rizvi *et al*., 2013). These drug decrease uterine symptoms of adenomyosis but it return quickly after the medicine wears off. Hysteroscopic endometrial ablation is good for heavy bleeding per vagina rather than menstrual cramps is if main symptoms of adenomyosis. However, complete eradication of deep adenomyosis is problematic and is responsible for treatment failure. Uterine artery embolization has also been used to relieve symptoms for some women, although, success rates vary widely. Thus, the purpose of this study is to evaluate the clinical profile associated with adenomyosis and to determine the prevalence of adenomyosis in hysterectomy specimens, frequency distribution as well as to correlate clinical examination with histopathological examination.

MATERIALS AND METHODS

Type of the study: The retrospective study was conducted at the Department of Obstetrics and

Corresponding Author: Nagi A. Al-Haj, Department of Medical Microbiology, Faculty of Medicine and Health Sciences, Sana'a University, P.O. Box 13078, Sana'a, Yemen

Gynecology, 48 Model Hospital in women undergoing hysterectomy with a histologic diagnosis of adenomyosis.

Group of study: The study group included all the patients admitted to Obstetrics and Gynecology Clinic from February 2011-2013 in which the diagnosis of adenomyosis was histopathologicaly confirmed. We therefore, analyzed all the cases in which a hysterectomy was performed and a final histopathologic examination was obtained. We considered hypermenorrhea, dysmenorrhea, menorrhagia/metrorrhagia, pelvic pain and dyspareunia to be disease-specfic symptoms of adenomyosis. The following variables were abstracted: age, bleeding patterns, parity, previous abortions and surgical history. If none of the symptoms were present, the patient was considered to have no disease-specfic symptoms. Patients with malignant gynecological disease were excluded. A total of 73 hysterectomies performed during this period, 50 women return back the result of histopathology and 23 cases are lost their diagnosis of a denomyosis were histopathologicaly confirmed in 26 cases which is in 35.6% of the hysterectomies. The preoperative diagnosis of adenomyosis was based on clinical symptoms and image (ultrasound) and most cases were diagnosed as DUB (Dysfunctional Uterine Bleeding) before the operation and histopathology result.

Statistical analysis: Data were coded and entered into an Excel database (Microsoft, Redmond, Washington, DC, USA).

RESULTS AND DISCUSSION

All 73 cases of hysterectomy done at 48 Model Hospital with average stay in hospital 4 days, 50 case return back the result of histopathology (68.493%) and 23 cases without result of histopathology (31.50%). Between those 50 cases 26 (52%) case was adenomyosis by the result of histopathology. Table 1 shows the demographic status of the study population. The mean age at hysterectomy and result of adenomyosis is between 35 and 55years 25 cases (96.2%) while only one case above 55 (3.8%). In Table 2, we notice the relation between the adenomyosis and parity with increase the risk of adenomyosis by increase the parity as the multiparouse >5 children are 22 cases (84.6%) and in multiparous <5 children are 4 cases (15.4%). In Table 3 and 4, we see that there are 15 cases (57.7%) with history of abortion and 6 (23.07%) cases with history of previous cesarean section in adenomyosis post hysterectomy patient. In Table 5 and 6, nearly 23 cases (88.5%) were complained of vaginal bleeding represented by menorrhagia 16 cases (61.5%) complained of lower abdominal pain represented by dysmenorrhea and 9 (34.6) cases with dysparounia. The histological diagnosis of fibroid uterus in addition to adenomyosis was made in 6 women (26.9%), inflammatory conditions 9 cases (34.6%).

Table 1: Adenomyosis and age groups

Ages	Frequency	Percentage
35-55	25	96.2
56-75	1	3.8
Total	26	100.0

Table 2: Parity and adenomyosis

Parity	Frequency	Percentage
More than 5 children	22	84.6
<5 children	4	15.4
Total	26	100.0

Table 3: History of abortion and adenomyosis

History abortion	Frequency	Percentage
No	11	42.3
Yes	15	57.7
Total	26	100.0

Table 4: Previous operation and adenomyosis

Previous operation	Frequency	Percentage
No	20	76.90
Yes	6	23.07
Total	26	100.00

Table 5: Bleeding and adenomyosis

Bleeding	Frequency	Percentage
No	3	11.5
Yes	23	88.5
Total	26	100.0

Table 6: Fibroid and adenomyosis

Fibroid	Frequency	Percentage
No	19	73.1
Yes	7	26.9
Total	26	100.0

Adenomyosis is a condition of theuterus is a pathological entity characterized by the presence of endometrial glands and stroma embedded within the myometrium without apparent contact with the endo-myometrial junction (2.5 cm distance from endo-myometrial junction) (Garcia and Isaacson, 2011). As the results are conflicting, several potential forms of bias may have influenced the opposing findings of these studies. Various reports have outlined the appearance of symptomatic endometrial tissue in the abdominal wall following amniocentesis and pelvic surgery, especially, following caesarean section (Bergholt *et al*., 2001). In this study, adenomyosis was diagnosed when the distance between the lower border of the endometrium and the affected myometrial area was over one-half of a low-power field (2.5 mm) which was currently accepted

definition. Our data demonstrates that adenomyosis is a common finding present in 52% of hysterectomy specimens of middle aged women. The reported frequency in literature is 5-70%. It was rarely diagnosed correctly preoperatively and still largely under-diagnosed as it has no special symptoms of its own. The main presenting symptoms was vaginal bleeding and chronic lower abdominal pain with dysparounia, we also hypothesize that a history of parity are associated with a greater likelihood of having adenomyosis (Vercellini *et al*., 2006). Molitor (1971) in his report was suggested that the frequency of the condition increases with age until menopause and level off thereafter. Multiparty has been associated with an increase frequency of adenomyosis. Natural history of symptoms usually goes away after menopause. The mean age and parity in our study agrees with the literature. Moreover, as shown by our results where we attempted to include adenomyosis that may have been an incidental pathologic fnding as uterine fibroid, the percentage is 26.9% all in the age group between 35 and 55 years and it's significant, endometrial hyperplasia and also inflammation response is significant in adenomyosis uteruses during histopathology examination.

As shown by others, we found that women with adenomyosis were signifcantly younger and had lower uterine weights on pathologic examination than women with adenomyosis and leiomyomas and women with only leiomyomas (Garcia and Isaacson, 2011). Additionally, as previously shown, women with adenomyosis were more likely to have been pregnant and to be parous (Ferenczy, 1998; Levgur *et al*., 2000). However, in contrast with previous studies, we did not observe an increased rate of cesarean section or any other uterine surgical procedures in the women with adenomyosis (Azziz, 1989). However, implementing a relationship between surgical history and incidence of adenomyosis is risky when considering a selection of surgical patients. These patients were treated in an era of laparotomy. These results are likely to differ when these analyses would be carried out in the present. Several studies have reported a higher rate and an increased risk of spontaneous abortion in women with severe adenomyosis (Levgur *et al*., 2000; Sammour *et al*., 2002). On the one hand, in comparison with women who had never smoked, women who had smoked have been reported to be less likely to have adenomyosis (Levgur *et al*., 2000; Sammour *et al*., 2002). This finding can be explained by hormonally induced mechanisms: decreased serum levels of estrogen have been reported in smokers and adenomyosis has been suggested to be an estrogen-dependent disorder (Comiter, 2002; Giudice and Kao, 2004). Smoking has been shown to be an independent, dose-related risk factor for ectopic pregnancy (Giudice and Kao, 2004). Therefore, another possible explanation for the higher rate of ectopic pregnancies in the group of women with adenomyosis is the higher rate of patients with a history of smoking within this group. Nevertheless, these findings need to be interpreted with caution considering the difficulty to do histopathology for myometriam sample in women with ectopic pregnancy in our study. Furthermore, adenomyosis is a disease which in analogy to endometriosis is challenging to clinicians investigating the causes. Therefore, assumptions regarding an increased likelihood of a history of smoking and ectopic pregnancy in association with adenomyosis are hypotheses that require additional evidence. The mean age at hysterectomy in our adenomyosis group was 45 years in accordance with another study that reported a mean age of 41 years at hysterectomy and in contrast with most studies that reported a mean age over 50 years. This suggests that the clinical age of presentation of adenomyosis may be significantly earlier than previously appreciated and early-stage adenomyosis might present a different clinical phenotype (Azziz, 1989). A limitation of this study was its retrospective design which precluded objective measures of symptom severity. While the larger prospective studies and non-invasive diagnostic modalities are required for a better understanding of adenomyosis.

CONCLUSION

The results of this study indicate that multiparty, previous abortion, smoker and women having irregular cycles were more risk of having adenomyosis. Thus this study stresses the need for larger population based prospective epidemiological studies to find out clear aetiopathology and clinical symptoms of adenomyosis, so that, it will be diagnosed non-surgically and treated medically avoiding the risks of morbidity, mortality and financial burden to women.

REFERENCES

Azziz, R., 1989. Adenomyosis: Current perspectives. Obstetrics Gynecology Clin. North Am., 16: 221-235.

Bergholt, T., L. Eriksen, N. Berendt, M. Jacobsen and J.B. Hertz, 2001. Prevalence and risk factors of adenomyosis at hysterectomy. Hum. Reprod., 16: 2418-2421.

Bhosle, A. and M. Fonseca, 2010. Evaluation and histopathological correlation of abnormal uterine bleeding in perimenopausal women. Bombay Hospital J., 52: 69-72.

Comiter, C.V., 2002. Endometriosis of the urinary tract. Urologic Clin. North Am., 29: 625-635.

Dueholm, M., 2006. Transvaginal ultrasound for diagnosis of adenomyosis: A review. Best Pract. Res. Clin. Obstetrics Gynaecol., 20: 569-582.

Ferenczy, A., 1998. Pathophysiology of adenomyosis. Hum. Reprod. Update, 4: 312-322.

Garcia, L. and K. Isaacson, 2011. Adenomyosis: Review of the literature. J. Minimally Invasive Gynecol., 18: 428-437.

Giudice, L.C. and L.C. Kao, 2004. Endometriosis. Lancet, 364: 1788-1799.

Levgur, M., M.A. Abadi and A. Tucker, 2000. Adenomyosis: Symptoms, histology and pregnancy terminations. Obstet. Gynecol., 95: 688-691.

Molitor, J.J., 1971. Adenomyosis: A clinical and pathologic appraisal. Am. J. Obstetrics Gynecol., 110: 275-282.

Rizvi, G., H. Pandey, H. Pant, S.S. Chufal and P. Pant, 2013. Histopathological correlation of adenomyosis and leiomyoma in hysterectomy specimens as the cause of abnormal uterine bleeding in women in different age groups in the Kumaon region: A retroprospective study. J. Mid Life Health, 4: 27-30.

Sammour, A., I. Pirwany, A. Usubutun, J. Arseneau and T. Tulandi, 2002. Correlations between extent and spread of adenomyosis and clinical symptoms. Gynecol. Obstetric Inves., 54: 213-216.

Vercellini, P., P. Vigano, E. Somigliana, R. Daguati and A. Abbiati *et al*., 2006. Adenomyosis: Epidemiological factors. Best Pract. Res. Clin. Obstetrics Gynaecol., 20: 465-477.