ORIGINAL ARTICLE

Sleep Quality in Women with Endometriosis

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Abstract

Background: Endometriosis is a gynecological disorder characterized as the implantation of endometrial tissue outside the uterine cavity. Psychological symptoms such as anxiety, bipolar disorder, depressive symptom and impaired quality of life are common in these women. Sleep quality had not been considered in these women as it should be. The goal of this study was to evaluate sleep quality in women with endometriosis.

Methods: In this cross-sectional study 61 married women with laparoscopically diagnosed endometriosis asked to fill valid and reliable Pittsburgh Sleep Quality Index (PSQI).

Results: Mean age and mean education level were 31.4±6.7 years and 11.7±3.1 years, respectively. Dysmenorrhea followed by dyspareunia was the most common symptoms (68.8% and 40.3%). Mean PSQI score was 6.1±3.4, twenty eight (45.9%) had PSQI score equal or less than 5 and 33 (54.1%) had PSQI score more than 5 (poor sleep). Mean PSQI was significantly different between cases with and without dysmenorrhea and dyspareunia.

Conclusion: Sleep quality should be considered in women with endometriosis.

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Introduction

Endometriosis is a gynecological disorder characterized as the implantation of endometrial tissue outside the uterine cavity. The prevalence of endometriosis has been reported to be between 6 to 10% in the general female population and higher (5% to 50%) in infertile women (1,2). Although the exact etiology of endometriosis is not clear, retrograde menstruation has been considered as the most common etiologic cause. In most women, peritoneal macrophages clear menstrual effluent.

Clinical symptoms of endometriosis in affected women could range from asymptomatic to different disabling symptoms such as abnormal menstrual bleeding, dysmenorrhea and dyspareunia (DD), chronic pelvic pain, and painful defecation (3,4). Psychological symptoms such as anxiety, bipolar disorder, depressive symptom and impaired quality of life (5-7).

Although there are some studies evaluating psychological problems in women with endometriosis, sleep quality evaluation is not regarded as well in these women. The goal of this study was to evaluate sleep quality in women with endometriosis.

Materials and Methods

In this cross-sectional study 61 married women with laparoscopically diagnosed endometriosis who referred to outpatient clinic of gynecology in Women's Hospital (affiliated to Tehran University of Medical Sciences) between March 2013 and September 2013) were enrolled. Cases with psychological problems and women who were under treatment for depression.

A structured questionnaire applied to collect information about age, BMI (Body Mass Index), history of infertility, family history of endometriosis, surgery history, clinical symptoms and age at the first menstruation.

We collected information about age, BMI, history of infertility, family history of endometriosis, surgery history, clinical symptoms and age at the first menstruation.

Pittsburgh Sleep Quality Index (PSQI), a self-administrative instrument, consists of 9 questions generating seven-component scores (sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction). Each

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component score ranged from 0 to 3 (0, not in the past month; 1, less than once per week; 2, once or twice per week; and 3, three or more times per week). A valid and reliable Persian version of this test was applied for assessing the quality of sleep in current survey. The total score ranges from 0 to 21 while higher scores indicates poorer sleep quality; A total score ≥ 5 indicates a 'poor' sleeper. Valid and reliable Persian version administered (8).

Data were analyzed using SPSS for windows (version 18; SPSS Inc., Chicago, IL, USA) and presented as mean± SD. The Mann–Whitney U test applied for continuous as well as the Pearson χ^2 test with Fisher's exact test for categorical variables assessment. P-value < 0.05 was considered statistically significant.

Results

Sixty one women with endometriosis enrolled in this study. Mean age and mean education level were 31.4±6.7 and 11.7±3.1 years, respectively. Mean age at the first menstruation was 12.7±2 years and mean BMI was 25.4±5.1 kg/m2. Seven women were single (11.4%) and others married. Mean years of married life was 16.4±7.4 years. Positive family history of endometriosis reported in 8 (13.1%) and 31 (50.8%) had previous surgery. Only 14 cases had one clinical symptom and dysmenorrhea followed by dyspareunia were the most common symptoms (68.8% and 40.3%). Pelvic pain and pain during defecation had been reported by 21 (34.4%) and 13 (21.3%).

Mean PSQI score was 6.1±3.4, twenty eight (45.9%) had PSQI score equal or less than 5 and 33 (54.1%) had PSQI score more than 5 (poor sleep).

Mean age, BMI, education level and age at the first menstruation were not significantly different between patients with and without poor sleep (Table 1).

Mean PSQI score was significantly different between patients with and without dyspareunia

Table 1. Mean age, BMI, Education level and age at the first menstruation in patients with and without poor sleep.

	PSQI≤5	PSQI>5	P
Age	31.2±6.2	31.5±7.2	0.8
BMI	24.8±5.3	28.5±5	0.4
Education level	12.2±3.1	11.3±3.2	0.2
Age at the first menstruation	12.8±1.9	12.6±2.1	0.6

Table 2. Mean PSQI in patients with and without dyspareunia

	With dyspareunia (N=25)	Without dyspareunia (N=36)	P
PSQI score	7.5±4	5.1±2.6	0.01

(Table 2).

Mean PSQI score was significantly different between patients with and without dysmenorrhea (Table 3).

Mean PSQI score was not significantly different between patients with and without pelvic pain (Table 4).

Table 3. Mean PSQI in patients with and without dysmenorrhea.

	With dysmenorrhea (N=42)	Without dysmenorrhea (N=19)	P
PSQI score	6.8±3.6	4.6±2.2	0.008

Table 4. Mean PSQI in patients with and without pelvic pain

	With pelvic pain (N=21)	Without pelvic pain (N=40)	P
PSQI score	7.3±2.4	5.5±3.7	0.05

Mean PSQI score was not significantly different between patients with and without pain during defecation (Table 5).

Discussion

The results of this study showed that near 50% of

Table 5. Mean PSQI in patients with and without pain during defecation.

	With pain during defecation (N=13)	Without pain during defecation (N=48)	P
PSQI score	8±4.7	5.6±2.8	0.1

enrolled patients had poor sleep and mean PSQI score differed significantly between women with and without dyspareunia and dyspareunia symptoms. Pain is the most common clinical presentation of women with endometriosis while dysmenorrheal is the most frequent presentation followed by dyspareunia and pelvic pain (3). As our results showed, dysmenorrheal was the most presenting symptoms in our patients.

Near 40% of women who enrolled in this study had dyspareunia. Dyspareunia had been considered to be related with negative attitude toward sexuality, anxiety, and avoidance of intercourse (4).

Endometriosis is a leading cause of infertility which sequentially psychological stress, low self-esteem, depression and decreased quality of life (7).

Until now, sleep quality had not been considered precisely in women with endometriosis. In this study we found that poor sleep could be present in near 40% of cases and patients with dysmenorrheal and dyspareunia mean PSQI score is higher than cases without these symptoms which could show that clinical symptoms in women with endometriosis could affect quality of sleep. We found no statistically significant difference between age, education level, BMI and age at the first menstruation in cases with

and without poor sleep.

To the best of our knowledge this is the first study evaluating sleep quality in women with endometriosis. This study had some limitations. First, it was a single center study. Second, the sample size was limited. Thus, large multi centric studies should be performed.

Conclusion

As women with endometriosis suffer from different psychological problems, sleep quality should be considered in women with endometriosis.

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