

Depression in Thai Patients with Rheumatoid Arthritis

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Abstract

A wide spectrum of behavioral and psychological disturbances, in particular depression, has been described as a prevalent problem in patients with rheumatoid arthritis (RA). The investigators proposed to evaluate the correlations of depressive symptoms and the disease activity of RA in Thai patients. A variety of aspects of disease activity included in the assessment were the number of swollen joints, the number of tender joints, overall tenderness of the joints (assessed by using the Ritchie Articular Index), overall pain (assessed by using the visual analog scale for pain), joint functional class, and disease duration. The 24-item Hamilton Rating Scale for Depression (HRSD) was the measure used to determine the severity of depressive symptoms. The correlations of HRSD scores and the data relevant to the disease activity were evaluated by using Pearson correlation test. A total of 75 female and 4 male patients participated in this study. Their mean age and mean duration of disease were 49.81 and 7.48 years, respectively. The mean score of HRSD was significantly correlated with those of the number of swollen joints, the number of tender joints, the Ritchie Articular Index, the visual analog scale for pain, and the joint functional class. In conclusion, depression is highly correlated with some respects of the disease activity of RA, especially the number of swollen joints and joint functional class. The results of the present study are not much different from those of previous studies conducted in western countries. Careful evaluation of the disease activity of RA will be helpful in detecting the depression comorbidity in Thai patients suffering from this disease.

Key word : Arthritis, Rheumatoid Arthritis, Depression, Disease Activity

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Rheumatoid arthritis (RA) is a chronic inflammatory disease of the joints. The physical symptoms ascribed to this condition are pain, joint swelling, and limitations of movement. Although RA is a physical disease, it has long been suspected and explicitly recognized that emotional factors play a role in the pathogenesis(1).

Of many psychosocial problems, depression has been considered as a prevalent problem in RA patients. Its prevalence rates in RA patients are in the range of 15-42 per cent(2-4). In comparison to non-RA controls, the occurrence of depression is significantly increased in RA patients(5).

Depression affects not only on the psychosocial aspects but also on the course and prognosis of RA. The results of a study have been shown that depressed RA patients are more likely than their non-depressed counterparts to report joint pain, impaired functional status, and deteriorating health(2). Moreover, depressed RA patients also spent 5.8 more days in bed per month than non-depressed RA patients.

Similar to other depressive disorders that respond well to antidepressants(6), depression in RA patients can be treated with some antidepressants. The antidepressant treatment is beneficial not only for the relief of depressive symptoms themselves but also for the reduction of rheumatic pain(7).

Since depression comorbidity is a prevalent and treatable condition, physicians taking care of RA patients should be concerned with this problem in their everyday clinical practice. To increase the awareness of this problem, many studies have been carried out to examine the correlation of depression with a variety of demographic data, socioeconomic factors, and disease activity(2,8,9). The results of those studies have shown the correlation of depression and several examined factors. However, all of the studies were conducted in western countries. Whether or not the results of those studies can be applied in Asian patients is not yet known. The investigators, therefore, proposed to study the correlation of depression with the disease activity of RA in Thai patients.

MATERIAL AND METHOD

This study was carried out at Maharaj Nakorn Chiang Mai Hospital. Only patients who had

met the diagnostic criteria for RA(10) and had regularly visited the rheumatology outpatient clinic were requested to participate in this study.

The demographic data of interest were age, sex, marital status (married and no spouse), and educational status. The marital status was classified as married and no spouse (single, divorce, and widow). The educational status was classified as 6 years or less of education, finishing primary school, finishing secondary school, and finishing high school or higher.

Six aspects of the disease activity included in the assessment were the number of swollen joints, the number of tender joints, overall tenderness of the joints, overall pain, functional class of the joints, and disease duration. The number of swollen joints was counted as described by Preevo *et al* (11). The tender joint count was performed on 68 joints as described by the American College of Rheumatology(12). Overall tenderness of the joints was computed by using Ritchie Articular Index (RAI)(13). The RAI could be computed by rating the tenderness (0 or not tender, 1 or tender, 2 or tender and winced, and 3 or tender, winced, and withdraw) of 30 joints (15 joints on each side of the body). The visual analog scale for pain (VASP) was a 10 cm length ranging from 0-10 (no pain at all to very severe pain)(14,15). Function of the joints was classified by using the method modified from that described by the American College of Rheumatology(16,17). The joint functional class was rated from 0-4 (from no difficulty to disability). The disease duration was counted in years. A variety of depressive symptoms were measured by using the 24-item Hamilton Rating Scale for Depression (HRSD)(18). Regarding the HRSD, the higher the score, the more severe the depressive symptoms.

The effects of sex and marital status on the severity of depressive symptoms were assessed by using Student - *t* - test. The correlations of depression with age, educational status, and six aspects of the disease activity were assessed by using the Pearson Correlation (r) Test. Two-tailed significant correlation at the *p*-value being less than 0.05 indicated significant correlation. The statistical analysis was conducted by using SPSS for windows.

RESULTS

Seventy-five female and 4 male patients participated in this study. Their mean age (SD) and mean duration of disease (SD) were 49.81 (12.24)

and 7.48 (6.05) years, respectively. Fifty-seven patients were rheumatoid factor positive. In addition to nonsteroidal anti-inflammatory drugs, prednisolone, chloroquine, methotrexate, and salazopyrin were used in 29, 62, 39, and 1 patient, respectively. The marital status was classified as single, married, divorce, and widow in 8, 51, 3, and 17 patients, respectively. While 7 patients had 6 years or less of education, 64, 5, and 3 patients finished primary schools, secondary schools, and high schools or higher, respectively.

The means (SDs) of the number of swollen joints, the number of tender joints, the RAI score and the VASP score were 14.50 (9.67), 9.78 (8.45), 8.63 (6.02), and 3.16 (2.05), respectively. The number of patients whose joints were in functional class I, II, and III was 21, 54, and 4, respectively. None was in functional class IV. The mean (SD) HRSD score was 12.27 (7.67).

Due to the very small proportion of male patients, the difference of mean HRSD scores between male and female groups was not analyzed. The mean HRSD scores were not significantly different between married patients and no-spouse patients ($t = 0.34$, $p = 0.73$).

The mean score of HRSD was not significantly correlated with those of age and educational status (Table 1). However, the mean score of HRSD was significantly correlated with those of the number of swollen joints, the number of tender joints, the VASP, and the joint functional class.

Table 1. Correlation of the HRSD scores and the demographic data and disease activity.

The correlation of the mean score of HRSD and that of ^a	Pearson correlation (r)	Significance of the correlation (p) ^b
Age	0.06	0.60
Educational status	-0.20	0.73
The number of swollen joints	0.33	0.003
The number of tender joints	0.26	0.02
The RAI	0.22	0.05
The VASP	0.27	0.02
The joint functional class	0.37	0.001
Disease duration	0.04	0.72

^a HRSD = Hamilton Rating Scale for Depression,

RAI = Richie Articular Index, VASP = Visual Analog Scale for Pain

^b $p < 0.05$ indicates the significant correlation

There was a trend of the correlation between the mean score of HRSD and that of RAI. No correlation between the mean score of HRSD and that of disease duration was found.

DISCUSSION

The results of this study show the correlation between depressive symptoms and some respects of the disease activity of RA in Thai patients. Because the number of swollen joints and the joint functional class are highly correlated with depression, these aspects of the disease activity should be of concern in everyday clinical practice. The r's being less than 0.30 suggest that the number of tender joints and the overall pain are not highly correlated with depression. In addition, there was no difference of the severity of depressive symptoms between married and no-spouse patients.

The finding that depression is correlated with the number of swollen joints and the joint functional class is not much different from the results of previous studies conducted in western countries(8). The correlation of depression and functional class of the joints found in this study is also in concordance with the finding that the difficulty in coping with impaired functioning is a cause of depression(9).

The correlation of depression and the number of swollen joints may be caused by the fact that the number of swollen joints is highly correlated with the joint functional class. While joint swelling is a sign of severe joint destructiveness, the destructiveness is also the cause of impaired joint function. Because of this, the number of swollen joints is also an aspect of the disease activity highly correlated with depression.

Some limitations should be considered in interpreting the results of this study. First, not only the disease activity but also the drugs used to treat RA may cause depression. RA patients who take more medication to relieve their severe pain and disability are more likely to have drug-induced depressive disorders. Second, this study examined only limited factors that may be correlated with depression. Other factors possibly correlated with depression should be further studied.

In conclusion, depression is highly correlated with some aspects of the disease activity of RA, especially the number of swollen joints and joint functional class. The results of the present study are not much different from those of previous

studies conducted in western countries. Careful evaluation of the disease activity of RA will be helpful

in detecting the depression in Thai patients suffering from this disease.

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การซึมเศร้าในผู้ป่วยโรคข้ออักเสบชนิดรูมาตอยด์ไทย

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ความผิดปกติทางด้านพฤติกรรมและจิตใจหลายประการ โดยเฉพาะการซึมเศร้า เป็นปัญหาที่พบได้บ่อยในผู้ป่วย โรคข้ออักเสบชนิดรูมาตอยด์ ผู้วัดเส้นที่จะประเมินถึงความสัมพันธ์ของอาการซึมเศร้ากับความเจ็บป่วยของโรคข้ออักเสบชนิดรูมาตอยด์ในผู้ป่วยชาวไทย แบ่งมุขของความเจ็บป่วยที่ถูกประเมินประกอบด้วย จำนวนข้อที่บวม, จำนวนข้อที่กดเจ็บ, the Ritchie Articular Index, the visual analog scale for pain, ความสามารถในการใช้ข้อ และระยะเวลาป่วย การประเมิน ความรุนแรงของอาการซึมเศร้ากระทำโดยใช้แบบประเมิน 24-item Hamilton Rating Scale for Depression (HRSD) ความสัมพันธ์ระหว่างคะแนนของ HRSD และข้อมูลด้านความเจ็บป่วยถูกประเมินโดยใช้ Pearson correlation test ผู้ป่วยที่เข้าร่วมวิจัยเป็นหญิง 75 คน และชาย 4 คน อายุเฉลี่ยและระยะเวลาที่เจ็บป่วยเท่ากัน 49.81 และ 7.48 ปี ตามลำดับ ค่าเฉลี่ยของ HRSD มีความสัมพันธ์อย่างมั่นคงกับคะแนนเฉลี่ยของจำนวนข้อที่บวม, จำนวนข้อที่กดเจ็บ, the Ritchie Articular Index, the visual analog scale for pain และความสามารถในการใช้ข้อ ในผู้ป่วยโรคข้ออักเสบชนิดรูมาตอยด์ไทย การซึมเศร้ามีความสัมพันธ์อย่างมากกับบางแบ่งมุขของความความเจ็บป่วย โดยเฉพาะจำนวนข้อที่บวมและความสามารถในการใช้ข้อ ผลการศึกษานี้เมื่อต่างจากผลการศึกษาที่ทำก่อนหน้านี้ในประเทศตะวันตก การประเมินความเจ็บป่วยของโรคข้ออักเสบชนิดรูมาตอยด์จะลดลงเมื่อมีส่วนช่วยให้การตรวจหาการซึมเศร้าในผู้ป่วยไทยที่ป่วยด้วยโรคดังกล่าว กระทำได้ดีขึ้น

คำสำคัญ : โรคข้ออักเสบ, โรคข้ออักเสบรูมาตอยด์, การซึมเศร้า, ความเจ็บป่วย

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