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Hostility in Patients with Rheumatoid Arthritis: A Feature that We Should Not Overlook

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Abstract

Background: Although it is well known that psychiatric symptoms often occur in patients with rheumatoid arthritis (RA), personality features, especially the hostility component, are not well enough studied in these patients.

Methods: In the present study hostility and psychiatric symptomatology were studied in 51 consecutive RA female patients using the Hostility and Direction of Hostility Questionnaire (HDHQ), the Delusions Symptoms States Inventory/states of Anxiety and Depression (DSSI/sAD), and the Symptom Check List-90R (SCL-90R). A group of 33 healthy women was used for comparison.

Results: It was observed that RA patients reported high levels of externally directed hostility, paranoid hostility and guilt. On psychiatric symptomatology, RA patients reported higher levels of somatization, anxiety, depression and obsessive compulsiveness.

Conclusions: RA patients are more likely to express hostility, than the healthy population. They also experience more depressive and anxiety symptoms.

Keywords: Hostility; Rheumatoid arthritis; Depression; Somatization

Introduction

Rheumatoid arthritis (RA) is the most common inflammatory arthritis. Its prevalence rate is near to 1% and its annual incidence 3 per 10,000 adults [1]. RA is a chronic disease, where the autoimmune system causes inflammation of the joints and the surrounding tissues. It typically results in warm, swollen, and painful joints. Pain and stiffness often worsen following rest. Most commonly, the wrist and hands are involved, with the same joints typically involved on both sides of the body [2].

Health professionals, that treat patients with RA, come across the psychological burden these patients carry. Blom et al. in 2014 measured embitterment in patients with a rheumatic disease after a disability pension examination. They concluded that after a disability pension examination, embitterment is present in about one out of five patients with a rheumatic disease [3].

Psychiatric disorders, such as depression and anxiety, are found to be of great importance in patients with RA. It is certain that depressive symptoms occur in patients with rheumatoid arthritis (RA) more often than the general population [4]. Matcham et al. after having meta-analyzed 72 studies, where 13.189 patients were included, proposed that depression is highly prevalent in RA, present in 16.8% of RA patients and associated with poorer RA outcomes [5]. Deb et al. in 2018 estimated the excess clinical, humanistic, and economic burden associated with depression among working-age adults with RA [6]. Marrie et al. in 2018 associated "common mental disorders", meaning depression, anxiety and bipolar disorder, with increased mortality and suicide risk in patients with three immune-mediated inflammatory diseases (IMID), inflammatory bowel disease (IBD), multiple sclerosis (MS) and rheumatoid arthritis (RA) [7].

Even at early stages, psychological distress is a relatively common experience. Hyphantis et al. [8] investigated psychiatric manifestations, personality traits, and ego mechanisms of defense involved in 22 patients suffering from early rheumatoid arthritis. They came to the conclusion that social dysfunction, along with the less adaptive defense style, which under the stress of the disease exacerbation turns to "borderline", underlines the importance of a careful assessment and consultation in early RA patients, in order to face the distress shortly after diagnosis and highlights potential risk factors for future adaptation to exacerbations of the disease.

Personality features, on the other hand, are less studied in these patients. Alexithymia, a personality construct with difficulties in affective self-regulation, might have a substantial role in pain perception as well as depression in patients with RA, according to Kojima M et al. [9]. To our knowledge, there is no recent study that has studied hostility in RA patients. Levitan in 1981 proposed patterns of hostility, as they were revealed in the fantasies and dreams of 25 women with rheumatoid arthritis [10].

The purpose of the present study was to shed some light into the psychopathology of patients suffering from rheumatoid arthritis, as far as hostility was concerned. General psychiatric symptoms were also assessed, as well.

Methods

Fifty-one female patients, followed-up as outpatients in the Rheumatology clinic, Department of Internal Medicine, University of Ioannina Medical School were consecutively enrolled in the study. None of the patients suffered from any other somatic disease, or any psychiatric disease. Demographic (age, marital status, education years, employment) and clinical characteristics of the patients (disease duration in years, number of swollen joints, number of tender joints) were gathered by their therapists-Rheumatologists. Thirty-three women of the same social and educational level, which did not manifest any somatic or psychiatric problem, were used as a comparison group.

All participants completed the Hostility and Direction of Hostility Questionnaire (HDHQ), the Delusions Symptoms States Inventory/states of Anxiety and Depression (DSSI/sAD), the Symptom Check List-90R (SCL-90R), and a modified form of the Schedule of Recent Experiences (SRE).

The HDHQ [11] is an attitudinal measure for a wide range of possible manifestations of hostility having little implication of aggressive behaviour physically expressed. It reflects, as a result of frustrating occurrences, two hostility dimensions: a tendency to evaluate persons, including the self, in negative and unfavorable terms and a readiness to respond with aggressive behaviour. It consists of 52 items presented in five subscales. Three subscales, acting-out hostility, criticism of others and paranoid hostility, are measures of extrapunitiveness. Two subscales, self-criticism and guilt, measure intropunitiveness. Total hostility is the sum of the five subscales. Generally, the accepted norms for total hostility in normal populations are between 13 and 15 [11] but higher norms have been also suggested [12]. The HDHQ has been used in Greek normal populations [13] as well as in psychiatric [14] or somatic patients [15].

The DSSI/sAD [16-18] is a questionnaire examining symptoms of anxiety and depression. It consists of fourteen questions, seven measuring anxiety and seven measuring depression. It can be used as a screening test in discriminating normal subjects from people with psychiatric symptoms, but it is also an indicator of the intensity of anxiety and depression. This is not a well-known or widely used instrument despite its interesting properties which make it preferable in screening studies. It is very easy to complete and gives a simple and rapid evaluation of anxiety and depression. It focuses exclusively on recent symptomatology uncontaminated by items related to personality or other attributes.

An instrument like this, incorporating anxiety and depression, seems to be more appropriate for surveys in medical patients since it is well established that these phenomena mainly coexist and therefore should be co-examined [19]. The total score for each subscale is the sum of its items scores (range of scores 0-21). The cut-off score for each subscale is 3. Eighty two percent of the general population [20] give scores below the cut-off score, and should be regarded as free from psychiatric symptoms. Eleven percent give scores between 3 and 6 and are regarded as having some sort of borderline psychiatric symptomatology whilst seven percent score above six and could be regarded as being psychiatric patients. In Greek population, normative data and data from psychiatric and medical patients are available [14,15,21].

The SCL-90R [22,23] is an inventory oriented toward the measurement of psychopathology in psychiatric and somatic out-patients. It examines the degree of distress in a series of 90 psychiatric symptoms in nine subscales: somatization, obsessiveness compulsiveness, interpersonal sensitivity, depression, anxiety, aggressiveness, phobic anxiety, paranoid ideation and psychoticism. Each item is rated on a range from 0 to 4. Scores from the nine subscales are factorized so that the score of each has a range from 0, indicating no distress at all, to a maximum of 4, when there is extreme distress.

The SRE [24] was reduced to thirty-one items. Nine items were discarded as not reflecting the Greek everyday life. The participants were asked to report whether the listed events occurred to them over the past twelve months.

The statistical analysis was carried out with the Statistical Package for the Social Sciences, SPSS/PC+ [25]. For the ordinal variables the nonparametric rank-order correlation coefficient Kendall's ô-b [26] was used. The case for using this with psychometric data has been argued by Priest (1976) [27]. Briefly, it is a coefficient of association that makes no assumptions about the normality of the underlying distribution of the data, other than that can be seen as categories ranked in order, it is appropriate for the ordinal level of measurement, it does not give undue value to outlying scores, gives coefficients of rank ordered correlations with a level of statistical significance and allows a partial correlation coefficient to be calculated if necessary.

Results

Hostility levels

Results are shown in table 1. Rheumatoid arthritis patients presented higher levels of hostility, as measured by HDHQ, in comparison to healthy subjects. They presented statistically significant difference regarding Extroverted Hostility ($p<.041$) and the Paranoid Hostility subscale ($p<.027$). The scores in the Guild subscale were, also, higher ($p<.015$), but not in the introverted hostility ($p<.147$). In Total Hostility no significant difference was proved ($p<.060$).

Psychiatric symptomatology

Results are shown in tables 2 and 3. Patients with Rheumatoid arthritis reported very high scores on Somatization ($p<.0008$ in table 4 and Anxiety ($p<.009$ in table 4 and $p<.001$ in table 5). Scores on Depression ($p<.012$ in table 4 and $p<.004$ in table 5), Phobic Anxiety ($p<.029$ in table 4) and Obsessive-Compulsiveness ($p<.031$) were, also, higher.

The demographic and clinical characteristics of the participants, as well as their scores in each scale are shown in tables 1 to 5.

Discussion

In the present study, female patients with rheumatoid arthritis were found to be more hostile than healthy women, specifically in the paranoid way. Paranoid hostility is a part of Extroverted Hostility, which means being hostile towards others, taking for granted that they intend to underestimate you or hurt you. Total Hostility did not differ between RA patients and healthy subjects, probably because it incorporates the internally orientated hostility. Introverted Hostility was not significantly different. As far as the psychiatric symptomatology is concerned, patients with RA were found more depressed, more stressed, more anxious and with a stronger tendency to somatization.

Psychiatric burden of people suffering from RA has attracted investigators' interesting for quite a long time. A restriction in the behavioral and verbal modes of affective expression has been considered

Table 1: Scores in HDHQ (hostility scale) of patients and controls.

	Rheum. Arthritis (N=51)	Subjects (N=33)		
	Mean (SD)	Mean (SD)	Kendall's	
			τ-b	p
Acting Out Hostility	3.7 (1.4)	3.4 (1.5)	.073	.151
Criticism of Others	6.1 (2.2)	5.1 (2.9)	.123	.121
Paranoid Hostility	3.2 (2.4)	2.1 (1.6	.204	**.027**
Self Criticism	3.9 (2.1)	4.0 (2.1)	.015	.441
Guilt	2.7 (1.8)	1.6 (0.9)	.238	**.015**
Extrapunitiveness	13.0 (4.8)	10.6 (4.7)	.179	**.041**
Intropunitiveness	6.6 (3.5)	5.5 (2.8)	.109	.147
Total Hostility	19.6 (7.5)	16.3 (6.2)	.159	.060

Table 2: Scores in SCL-90R of patients and controls.

	Rheum. Arthritis (N=51)	Subjects (N=33)		
	Mean (SD)	Mean (SD)	Kendall's	
			τ-b	p
Somatization	1.1 (0.7)	0.6 (0.4)	**.321**	**.0008**
Obsessive Compulsiveness	0.6 (0.5)	0.3 (0.4)	**.195**	**.031**
Interpersonal Sensitiveness	0.8 (0.6)	0.5 (0.4)	.120	.123
Depression	0.9 (0.6)	0.6 (0.5)	**.230**	**.012**
Anxiety	0.7 (0.7)	0.4 (0.3)	**.244**	**.009**
Hostility	0.4 (0.6)	0.3 (0.4)	.014	.447
Phobic Anxiety	0.3 (0.5)	0.1 (0.2)	**.208**	**.029**
Paranoid Ideation	0.5 (0.6)	0.5 (0.4)	-.033	.377
Psychoticism	0.2 (0.2)	0.1 (0.2)	.165	.065

Table 3: The scores in DSSI/sAD of patients and controls.

	R. Arthritis (N=51)	Subjects (N=33)	R. A. *vs* Subjects	
	Mean (SD)	Mean (SD)	Kendall's	
			τ-b	p
Anxiety	5.23 (4.4)	2.1 (2.8)	**.321**	**.001**
Depression	2.5 (3.3)	0.6 (1.2)	**.291**	**.004**
sAD	7.7 (7.2)	2.7 (3.9)	**.348**	**.0004**

Table 4: Age and sociodemographic characteristics of the participants.

	Rheumatoid Arthritis (N=51)	Subjects (N=33)	p
Mean Age (SD)	51.9 (7.0)	48.5 (8.2)	.620
Married (%)	49 (96%)	32 (97%)	.764
Education>12 years (%)	24 (47%)	16 (49%)	.698
Working (%)	25 (49%)	15 (45%)	.542

Table 5: Clinical characteristics of the RA patients.

Clinical Variables	Mean (SD)	Range
Disease duration (years)	9.4 (8.2)	0.5-28.8
Number of swollen joints	3.9 (5.5)	0-38
Number of tender joints	2.9 (4.1)	0-25

characteristic of rheumatoid arthritis which is classically described as a disease associated with constricted emotional expression [28-33]. It has been found that restricted affective expression does not uniformly characterize all rheumatoid arthritis patients, but only those with certain immunological and clinical features [34-36]. Cobb in 1959 [37] claimed that containment or suppression of hostile impulses emerges as a sensible synthesis of the known psychosocial factors in rheumatoid arthritis. Trying to support his hypothesis of suppressed hostility as a factor in rheumatoid arthritis, Cobb and his co-investigators [38] underlined that rheumatoid arthritics are more liable to divorce, but also, they put up with an unsatisfactory marriage longer than those who are free of the disease. This was more striking for males than for females. King et al. (1959) [39] studied certain psychosocial factors in a group of female patients with rheumatoid arthritis and compared them with two groups of controls. A disturbed relationship between patients and their mothers was observed. Levitan in 1981 [10] studied the patterns of hostility revealed in the fantasies and dreams of women with rheumatoid arthritis, while Spergel et al. [40] suggested that there may be a "chronic disease personality."

These data about hostility in RA patients are of great importance, especially for people who deal with them, either they are their therapists or they are their friends and relatives. Having to face with hostile people is pretty demanding. Therapists ought to carry this knowledge and endure hostile patients. What is more, by proposing the optimum therapy, psychotherapy or/and pharmacotherapy (depending on the whole of the psychiatric symptoms of each patient) not only would they comfort the "angry person", but they would help him meliorate its relationships.

These are all data concerning rheumatoid patients' psychopathology, that were gathered from clinically observing and examining patients. It is well-known in our days that all psychiatric symptoms and all psychological features come as an outcome of the brain function. Being more or less hostile, stressed or depressed is the results of certain parts of the brain, functioning in a certain pattern. Neurotransmitters, such as dopamine, serotonin and G-Amino-Butyric Acid, are being mal-regulated, and this malfunction produces psychiatric/psychological symptoms. To our knowledge, there has been no brain imaging, for example fMRI, to rheumatoid arthritis patients, so that we can really "see" the psychopathology of those patients. To examine the impact that rheumatoid arthritis has to the patients' brain and to try to understand them better. Therefore, to cure them more effectively, we think that this could be a nice goal for further assessment of the Rheumatoid Arthritis.

Conclusions

Patients suffering from rheumatoid arthritis exhibit more hostile, depression and anxiety symptoms, as well. It would be of great help for therapists to bear in mind this "co-morbidity", so that they could comprehend and cure them more effectively.

Limitations

We would like to point out that there were certain limitations to this study. First of all, the sample size was not large. Second, clinical parameters, such as pain and CRP measures, were not available. Third, no power analysis was conducted. Finally, our subjects were derived from a group of patients with RA visiting our university's rheumatology clinic. Although there were no significant differences in the background characteristics of RA patients who did and did not participate in the study, the sample may have differed from the RA patient population as a whole.

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