

# Cognitive Behavioral Therapy for Patient With Rheumatoid Arthritis and Obesity

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#### **Abstract**

Rheumatoid arthritis is an autoimmune disease that causes physical and psychological symptoms when patients are not monitored; these symptoms include depression, anxiety and even the risk of suicide. This study is a case report of one female patient who has Rheumatoid arthritis, and obesity. The present study was carried out with a multidisciplinary approach (physician and psychologist) and included psychological evaluations and cognitive behavioral therapy (CBT) after a hospital stay when the patient suffered changes in her general framework with a worsening of her disease. The CBT was effective in reducing the patient's depression and anxiety. In addition, the CBT reduced the patient's dysfunctional beliefs, extinguished the thoughts of suicide and taught her to better control her emotions, which reduced her daily peaks of physical pain, making them more affordable than before. CBT increased the patient's motivation, which led to an improvement in her condition and better adherence to treatment. The CBT was effective in treating an obese patient with rheumatoid arthritis who did not want to adhere to the treatment. This suggests that CBT can be an excellent tool for the

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treatment of chronic and autoimmune diseases; however, further studies are needed with more subjects.

**Keywords:** Rheumatoid arthritis; Cognitive behavioral therapy; Obesity

### Introduction

Rheumatoid arthritis (RA) is a progressive, systemic [1] autoimmune inflammatory disease that attacks the synovial membrane. Common symptoms are pain, stiffness, swelling and the loss of movement in the joints of the affected limbs. Other less common symptoms include fever, weakness and loss of appetite [1].

RA is considered to be the most serious form of inflammatory arthritis [2], and it can get progressively worse even when a patient is on medication. A progressive worsening of RA can increase the rates of mortality and morbidity and reduce a patient's quality of life by causing pain, fatigue and depression [3].

The symptoms of stress in RA patients, which are commonly associated with the levels of pain and disability, the progressive required increase of health care or difficulties adapting to prescribed treatments, do not have any relationship with the duration of the disease [4].

Personality traits and other features can affect the sense of well-being of an individual with RA. Variations in how patients perceive the RA symptoms can make some subjects more sensitive, which can lead to negative feelings and the creation of coping strategies, some of which are effective when combined with altered levels of stress [4, 5].

Patients with chronic diseases have a higher prevalence of depression and anxiety, which contributes to the poor prognosis of the disease and lower treatment adherence [6, 7, 8]. In RA patients, the presence of depression and anxiety is favored by the aforementioned characteristics of the disease and potential changes in body image, either as a result of changes in the joints or systemic problems due to the medications [9].

Despite the known benefits of CBT for patients with health problems [10, 11], there are few studies of its applica-

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tion to specific frames of RA (pain, loss of movement, bodily deformity, dependence). Here, we report a case of a patient with RA who benefited from CBT. Patient signed a consent form and was aware of the experimental protocol (approved by the Ethics Committee at Federal University of Rio de Janeiro) before participation commenced.

## **Case Report**

The present patient was a 39-year-old female nurse who was referred by her doctor for evaluation and counseling after being hospitalized for two months. She was treated with a large dose of corticosteroids (60 mg/day prednisone) due to dyspnea and an arthritic crisis (in other words, her RA was in remission but the arthritic crisis resulted in severe RA with an involvement of nonarticular bodies (mainly her lung).

The patient reported that she had gained 35 kg (77.16 pounds) while she was hospitalized (two months), and she also complained of insomnia, even when using medication prescribed for insomnia (5 mg/day lorazepam). The patient also reported mood changes, anxiety attacks, thoughts of being a burden to her family and feelings of rejection. She had little interest in collaborating with her doctor and a poor adherence to drug treatment (680 mg of tocilizumab every four weeks). She also reported the presence of suicidal thoughts.

We used the following instruments to evaluate the present patient: the Mini-International Neuropsychiatric Interview (M.I.N.I., version 5.0), which detected severe depression and suicide risk (the patient threatened a drug overdose); the Beck Depression Inventory (BDI), which indicated severe depression (the patient had 61 points); the Beck Hopelessness Scale (BHS), which added 16 points and represented a serious lack of hope for the future; the Beck Suicide Ideation Inventory (BSI), which pointed to the presence of serious suicidal ideation; and the Hospital Anxiety and Depression Scale (HADS), which indicated the presence of severe depression and anxiety (namely, scores of 20 points for depression and 19 points for anxiety).

The present patient also received CBT. In the first session, she received a psycho-education about the illness (RA) and the medications used, and she was questioned about her (patient) vision of body changes after arthritis. The patient reported that she had previously believed in the possibility of a cure, but did not believe this anymore. She described that experienced severe pain at various points during the day and used medication for it (50 mg diclofenac sodium). She also said that the pain was "the worst of the disease" and complained of mood swings and insomnia. In addition, the patient reported feeling that "life is not worth it anymore" and "I am a fat burden to my family", which was associated with feelings of shame, hopelessness and sorrow.

In the same session was included technical training with progressive muscle relaxation (PMR), which the patient was told to practice during the day and at bedtime. Two daily schedules were used as a homework assignment: one for pain and the other for a change in mood. Each time the patient experienced a peak of pain or another uncomfortable change, she was asked to note the time, her automatic thoughts and the activity that she was engaged in at the time.

In the second session, the patient's daily records were checked and compared with each other. When we asked her about her feelings, the patient found that her mood changed every time she was annoyed or upset, and she would experience pain.

The patient stated that she had "a temper" and "got too stressed" and "no one cared because everyone felt sorry for her". When we asked about the reasons for the "punishment" of others, she pointed to obesity and arthritis as the cause and claimed to be a "burden" to everyone. We used Socratic questioning to undo dysfunctional beliefs.

She was trained to perform a relaxation technique with visualization before bedtime, and she was told to use PMR only in situations where she believed she would "lose control" or was "stressing". Her homework assignment was to maintain a daily log.

In the third session, the patient reported improvement with the relaxation technique used during the day and a consequent reduction of peak pain. She also reported improvements in her sleep during the night and that she was able to relax during the day. She said she was excited to continue the treatment for arthritis, and she was scheduled for an appointment with her doctor the following week.

The patient was asked to analyze her records of her daily activities and identify the activities in which she continued to show changes in her mood and pain. The patient identified consultations with a nutritionist and Weight Watchers. The patient reported that she was feeling very insecure and was afraid to fail in her efforts to lose weight. Indeed, the patient conveyed that she was very anxious before she checked her weight. Doctors taught the patient a diaphragmatic breathing technique that was performed before and during anxious situations.

In the fourth session, the patient demonstrated more confidence and was told to appear for medical appointments. She scheduled an appointment for the week after she was to begin another round of tocilizumab treatment. She reported that she was making progress in dealing with the anxiety she experienced before getting weighed. During the medical evaluation, she was prescribed clonazepam (4 mg) to be used in situations where she could not control her anxiety by other means.

The patient asked if she could use the relaxation exercises before beginning the anxiety medication because she was "afraid to give up". She was instructed to use the breathing and muscle relaxation techniques that she had learned because she was anxious while sitting in a chemotherapy clinic for over two hours for the implementation and monitoring of

medication (tocilizumab).

In the fifth session, the patient was questioned about her weight and body image. She said that she was more confident that she could lose some weight and be more comfortable with her body. By the fifth session, the patient had lost a total of 12 kg (26.45 pounds). When asked about her insomnia, she said that she could sleep through the night, even on the days when a crisis had occurred. Indeed, the patient stated that she would just wake up once during the night and then go back to sleep.

Because the patient would continue her medication sessions three days after finishing the fifth session, she was taught a new relaxation exercise, to face this situation, the exercise included viewing from the time she would leave the house until the time that she had to take her medicine at the clinic. The order of events used in the exercise followed the hierarchy of difficulty that the patient had ascribed to each at the sixth session, the patient conveyed that she was familiar with her appointments to receive medication and could now perform relaxation exercises before she got to the point of extreme anxiety. The patient seemed much more positive after the sixth session and had already scheduled her next session. Although she had spent three days in bed with nausea, vomiting and weakness after receiving the medication (tocilizumab), she said that she was feeling good.

In the seventh session, all of the tests that were performed at the initial visit were repeated. Psychiatric disorders were not detected by the M.I.N.I, and suicidal ideation was no longer present (assessed by the M.I.N.I and the BSI). In addition, the HADS did not detect depression and only demonstrated the presence of mild anxiety (3 points).

After the eighth session, the patient showed significant improvement and was discharged. Follow-ups were scheduled for every 15 days for the first two months and then every 30 days for three months until final discharge, 7 months after the beginning of the treatment.

#### Discussion

Previous studies have shown that women with RA are likely to present with more severe RA, experience more pain and suffer more limitations than men with RA. In addition, RA patients in general experience declines in motor skills and increased risk for the development of psychological disorders [12, 13].

The present patient received treatment for RA for 16 years and believed that the treatment was working. During a crisis, however, she had to be hospitalized, and doctors found that her RA had worsened. In a short period of time she had to adapt to a new treatment and its side effects (she gained 35 kg or 77.16 pounds), a significant worsening of pain and the imminent risk of death if the disease was not controlled.

When discharged, the attending doctor detected the

possible presence of depression and referred the patient for psychological evaluation and treatment. A psychological evaluation confirmed the presence of depression, which was associated with severe hopelessness, anxiety and a risk of suicide.

Being a chronic disease, RA requires adaptation and patients tend to lose hope for a better life as the condition worsens [6]. Such hopelessness is detrimental because it can compromise treatment adherence, increase depression and facilitate the emergence of suicidal ideation or worsen existing suicidal ideation [7, 8].

The patient completed eight CBT sessions in which she learned to identify automatic thoughts and distinguish them from her emotions. She also learned that the way she thinks influences her emotions, behavioral patterns and even her physiological responses.

The CBT sessions were an important milestone in the patient's treatment. Although drugs were administered to halt the RA the CBT allowed for personal evolution, which was important because she had to cope with her anxiety in the face of her situation.

Psycho-education was included throughout the CBT, and the psycho-education emphasized that she could make better choices if she was knowledgeable about her clinical situation and treatment. The patient's autonomy was valued throughout the treatment process because both the patient and the therapist are equally active and responsible for the conduct of the therapeutic approach [9, 14, 15]. Cognitive behavioral therapy appears to be a very suitable approach for patients with health problems and issues with medical treatments [13-16].

## Conclusion

In the present case, CBT enhanced adherence to medical treatments and reduced or eliminated the signs and symptoms of mental health issues that could lead to a worse prognosis. In addition, the CBT completely extinguished suicidal ideation. The present CBT protocol should be applied to a larger sample of patients to obtain a better evaluation of whether it may be a useful tool in the treatment of RA.

## **Declaration**

Institution to which work should be attributed: Laboratory of Panic and Respiration. Institute of Psychiatry, UFRJ. INCT Translational Medicine.

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