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Letter to the Editor / Editöre Mektup

Can systemic involvements, therapeutic approaches, and sociodemographic features of individuals be associated with depression in rheumatic diseases?

Sistemik tutulumlar, tedavi yaklaşımları ve bireylerin sosyodemografik özellikleri romatolojik hastalıklarda depresyon ile ilişkili olabilir mi?

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To the editor,

We read with interest the recent article entitled "Comparison between depression levels of women with knee osteoarthritis, rheumatoid arthritis, and fibromyalgia syndrome: a controlled study." published by Yılmaz et al.[1] in the issue of 61 of the Turkish Journal of Physical Medicine and Rehabilitation. The authors compared depression levels in subjects with knee osteoarthritis (OA), rheumatoid arthritis (RA), and fibromyalgia syndrome (FMS) to healthy subjects. We congratulate the authors for their successful study.

On the other hand, we have a few remarks with respect to the methodology of the study. First, current manuscript lacks of the clinical features of the RA patients. Rheumatoid arthritis may present with any sort of systemic involvements (i.e., vasculitis, pulmonary, renal, eye, hematologic, cardiovascular) and these systemic involvements are associated with disability.[2-4] Their therapeutic approaches (i.e., biologic agents, corticosteroid dose) depend on these systemic involvements. Therefore, we believe that both clinical features and their treatment methods are critical for depression in RA patients and we would be interested in gaining a better understanding the clinical features of this patient population. Second, a subgroup consisted OA patients. However, FMS and RA subgroups -were at a similar age with OA groups and were not evaluated regarding the knee OA. In addition, RA is characterized with synovitis, can aggravate joint damage, and eventually result in knee OA.[2,3] Besides, the authors used the Level 1-4 OA according to the Kellgren-Lawrence as an inclusion criterion and limited range of motion as the exclusion criterion. Therefore, severe OA (Level 3-4) without limited knee range of motion raise doubt. In this context, we would like to know the OA scores of the subjects in knee OA groups. Finally, we would be interested in knowing the sociodemographical features and comorbidities which may be related to depression such as marital status, socioeconomical status, diabetes mellitus, and hypertension.[5]

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Author's Reply

Dear editor,

First of all, we would like to express our thanks the reviewers for their interest in our study. We included a total of 569 participants as four different groups, three consisting of women with knee osteoarthritis (OA), rheumatoid arthritis (RA), fibromyalgia syndrome (FMS), and one consisting of controls. We hypothesized that knee OA, RA and FMS, chronic diseases which may lead to serious functional losses may also cause depression.[1] However, there were many variables which might be related to depression in three patients' groups. To report our findings in the best and understandable way according to the guidelines in the journal, we aimed at investigating the association between depression level and primary variables such as duration and severity of diseases, level of pain, radiographic score, and functional status in each patient' group.

In RA, one of our patients' groups, DMARD (methotrexate, leflunomide, sulfasalazine, hydroxychloroquine), biological agents (anti-TNF, abatacept, rituximab, tocilizumab), tofacitinib, and glucocorticoids may be used; however, despite aggressive treatment, targeted levels for disease control may not be able to be achieved in one third of patients.[2,3] The mean disease duration of our patients with RA was nearly five years. At the onset, the medications used by our patients were defined and the patients used or were using these related drugs including biologics as monotherapy or combination at different doses for different periods. In addition to aforementioned medications, some of our patients also received biphosphonate, calcium and vitamin D supplements, proton pump inhibitors, and non-steroid anti-inflammatory drugs at different doses at different periods. Since we considered that we would not reach reliable and precise results in RA patients due to a mean five-year complex drug use, we did not investigate the association of drug and depression.

In all groups in the study, those with a known disease such as hypertension and diabetes mellitus were excluded in the context of chronic diseases, as previously described in the Patients and Methods section. In RA, extra-articular involvement may be seen and vasculitis, pericarditis, pleuritic, amyloidosis and Felty syndrome, particularly may worsen the prognosis.[4] As they may affect the mood as well, systemic involvements based on RA were excluded out of the criteria in the context of chronic diseases, as previously described in the Patients and Methods section.

In the study, percentages of grades in knee OA patients according to the Kellgren-Lawrence Radiographic Scores (KLRS) were given in the Results section. In the light of KLRS scores, of all patients with knee OA, 23.0% were grade 1, 43.2% were grade 2, 28.8% were grade 3, and 5.0% were grade 4.[1] Several studies suggesting that no correlation is present between the clinical findings of knee OA and its radiological findings are available,[5,6] whereas some authors advocate that they are directly associated.[7] Plain radiographies reflect formed structural changes rather than disease activity.[5] In a study by Felson et al.,[6] knee OA was reported to be radiologically determined in knee radiographies of asymptomatic patients. In another study, however, it was reported that as medial KLRS increases, knee range of motion (ROM) decreases (flexion, r: -0.338 and extension, r: -0.456).[7] In knee OA, particularly in KLRS grade 4, the probability of ROM restriction increases; however, each case of KLRS grade 4 does not mean the restriction of ROM. As those with the restriction of ROM in knee OA group were excluded in our study, the rate of KLRS grade 4 patients to all knee OA patients was only 5%.[1]

In our study, the marital status of all participants in all groups was questioned at baseline. The number and percentages of married, unmarried and divorced participants were as follows, respectively: 91.3% (n=127), 2.2% (n=3) and 6.5% (n=9) in knee OA patients; 88.7% (n=126), 6.4% (n=9) and 4.9% (n=7) in patients with RA; 87.5% (n=119), 5.9% (n=8) and 6.6% (n=9) in FMS patients; and, 94.1% (n=143), 1.3% (n=2) and 4.6% (n=7) in controls. Between all groups, there was no statistical difference in the marital status between the groups (p=0.203).

Nevertheless, marital status is not the sign of depression alone. In marriages, such factors in women

as education status, age of marriage, perception of income, status of chronic diseases, experiencing a woeful event in the last six months, attempting to commit suicide so far, presence of a previously diagnosed psychological disorder, relationship with her partner/husband, relationship with her partner/husband's family, relationship with her own family, experiencing violence during her marriage and her abuse to children were also found to associated with depression.[8] However, our study was inappropriate to perform statistical analyses, as nearly 90% of women in each group were married and the number of married, unmarried and divorced women showed an unbalanced distribution. We also considered that it would be inappropriate to compare depression levels of participants in each group only as to whether they were married or not, since depression is associated with many subvariables in marriage.

Furthermore, we wished to determine the participants' level of income; however, more than 90% of women were unemployed (Table 1)[1] and economically dependent on their husbands. Some of them were living on with the help of their own family or staying with them, as their husbands were unemployed too. Additionally, several participants rejected to fill in this section, suggesting that they had no information on familial income or wanted to keep it a secret. Due to the lack of data related to the economic status, we were unable to analyze the level of income. In addition, for the evaluation of the association between the economic status and level of depression, whether individuals have difficulty in living on and meeting their needs are more critical signs than the amount of the money earned.[9] We consider that the association between the level of depression and income is a complex topic and it will be more reasonable to investigate it in another study.

In rheumatic diseases, symptoms related to the musculoskeletal system of patients include pain, swelling, limited movement, stiffness, decreased muscle strength, and fatigue. As well as the involvement of all synovial joints, RA mostly commences in metacarpophalangeal, proximal, interphalangeal, and metatarsophalangeal joints, and, then, wrists, knees, elbows, ankles, and hips are involved. The involvement of temporomandibular, sternoclavicular and cricoaritenoid joints is more uncommon. The involvement of neck, particularly of C1 and C2 joints, may be seen. Pain is severe in involved joints and accompanied by swelling either at the onset or with time. In patients with RA, the involvement of hip is seen in 20% of cases, and may lead to lower back pain and knee pain at the same side. The response of knee joint is seen as swelling on the joint in RA patients. Extreme knee effusions may lead to the Baker's cyst and one or both knees are mostly involved in the further years of the disease.[4,10-13]

In our study, the mean disease duration of patients with RA ranged between six months and 20 years. In these patients, as it may arise from inflammation in any period, knee pain may also develop due to knee OA, particularly seen at an advanced stage. Thus, to define the knee OA accompanying with knee pain in RA patients and exclude these patients, it was necessary to perform direct radiography in all RA patients, regardless of the disease duration and associated symptoms. We believe that imaging studies in these patients would be unethical for the differential diagnosis.

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