difference on vitamin D serum levels between patients previously treated or not treated with chemotherapy (17.8 ± 7.8 vs 19.3 ± 9.7 $p=0.6$). After subdivision of patients that referred hand arthralgia according to the different type of Als used: 22% have been treated with tamoxifen, 30%, anastrozole and 48% letrozole. Therefore, the baseline serum vitamin D concentrations did not significantly predict arthralgia in the overall group ($P = 0.70$) or separately in the single Als group (anastrozole ($P = 0.60$) or tamoxifene ($P=0.30$) or letrozole ($P = 0.60$, respectively).

Conclusion: Vitamin D serum concentrations in women treated with Als are at lowest ranges in the majority of the patients analysed, but no apparent interference with musculoskeletal symptoms was found related to the different concentrations; the cause of arthralgia might be better related to estrogen deficiency induced by Als their self.

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AB0915

ЭФФЕКТИВНОСТЬ АКУПUNKТУРЫ ПРИ ТЕРАПЕВТИЧЕСКИХ УПРАЖНЕНИЯХ ПРИ ЛЕЧЕНИИ МИОФАЦИАЛЬНОЙ БОЛИ В НИЖНЕЙ ЧАСТИ СПИНЫ

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Background: Myofascial pain syndrome in the lower back is one of the most common diseases. At the current time, there are no ideal ways to treat this disease. Pharmacological treatments are not suitable for many patients. Regular use of painkillers and NSAIDs is associated with the risk of serious adverse reactions in patients. Using only pharmacotherapy without using non-pharmacological treatment methods is not a rational approach to treating such patients.

Acupuncture has a wide range of effective methods of combating combat syndrome that can have a quick positive effect, and, unlike drugs, this method remains safe. Therapeutic exercise is a treatment method that is able to raise the general threshold of pain sensitivity by including non-specific adaptation mechanisms [1]. This effect develops slowly, but it acts for a very long time.

Objectives: The purpose of this study is to compare the effectiveness of acupuncture with massage in the treatment of myofascial pain in the lower back with complex treatment, including exercise.

Methods: A prospective clinical study was conducted with patients suffering from myofascial pain syndrome in the lower back, which were randomly divided into one of two groups: patients (60 cases) who received combined treatment including massage, acupuncture and exercise therapy, and patients (30 cases) of group 2 (G2) who received only massage procedures and acupuncture without medical gymnastics. They were assigned to group 1 (G1). The age composition of the G1 group of patients from 31 to 70 years. Gender composition - 22 (37%) - women, and 38 (63%) - men.

All patients received treatment 5 times a week (from Monday to Friday, excluding Saturday and Sunday), the total duration of the rehabilitation course is 10 days. The therapeutic program included the following non-drug methods of exposure: for G1, 30 minutes - an acupuncture session, 20 minutes a back massage session, and at least 45 minutes of exercises in the gymnastics hall with an instructor in physical therapy. G2 patients received similar non-drug therapy with the exception of classes in the gymnastics room. The visual-analogue scale (VAS) was used as a method of performance evaluation, which was evaluated at the beginning of the study, at the fifth, ninth and last visit to the clinic.

Results: The average time between the onset of clinical symptoms and the first day of treatment was 34.6 days. In 80% of patients, a history of pain lasted for more than 3 months. 89 patients (98%) completed the protocol: 60 (100%) in G1 and 29 (97%) in G2. The average VAS score in G1 was 6.9 at the beginning of the study and after the tenth session it dropped to 2, 6. A significant decrease in pain was registered in the G2 group (from 6.9 at the beginning of the study to 3.3 after the tenth session). A statistically significant difference ($p < 0.05$) between different sessions was noted.

In order to assess the period of time during which the effect of treatment is maintained, all patients were asked to send a subjective assessment on the VAS scale to the attending physician after completion of treatment monthly for 12 months. When analyzing these data, it was established

that the inclusion of physiotherapy exercises preserves a clear effect of therapy for 3.1 months longer than without the use of therapeutic gymnastics.

Conclusion: The results indicate high efficiency acupuncture in the treatment of myofascial pain syndrome, however, its combination with therapeutic exercises allows to better consolidate the effect and contributes to a longer remission of pain syndrome. It is necessary to establish clear criteria for inclusion in the treatment of exercise

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AB0916

INVESTIGATION OF PAIN AND DEPRESSION IN CANCER OUTPATIENTS RECEIVING CHEMOTHERAPY

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Background: Cancer treatments such as chemotherapy contribute to the development of depression and pain (1). Prevalence of pain ranges from 14% to 100% and depressed symptoms occur 1-42% in cancer patients (2). The empirical evidence indicates that pain is often untreated and may induce depression in cancer patients (1,2) and depression affects the management of symptoms such as pain (3). Therefore, depression and pain have interrelated effects with each other. Pain and depression in cancer patients lead to discontinuation of therapy, difficulties in controlling symptoms and negative treatment compliance (4). Studies report the need for more research on pain and depression associated with cancer treatment (2).

Objectives: The objectives of this study are to: 1) compare the depression levels of painful and painless cancer patients who received outpatient chemotherapy; and 2) investigate the relationship between pain and depression in these patients.

Methods: This study was carried out in outpatient chemotherapy unit of Hacettepe Oncology Hospital based in Ankara, the capital city of Turkey. The visual analog scale (VAS) was used to investigate if the patients may have had pain. The Brief Pain Inventory (BPI) was of help to assess the pain severity and pain interference on the function of patients while the Beck Depression Inventory (BDI) was applied to evaluate depression.

Results: The study findings are based on the outcomes of 27 cancer outpatients receiving chemotherapy. Their mean age was 56.89 ± 11.08 years (age range; 31-73). Almost half of the of patients had pain (48.15%). There was a difference between the depression scores of the patients who had pain and the other patients without pain but this is not statistically significant ($p=0.07$). The depression scores of painful patients and non-painful patients were 13 and 6, respectively. There was a moderate association between scores of pain severity and depression ($r=0.4$, $p=0.04$). Moreover, there was a high association between the score of depression and pain interference on function ($r=0.61$, $p=0.016$).

Conclusion: This study shows that pain is related with depression in cancer outpatients receiving chemotherapy. Depression may occur more frequently in patients who have experienced pain than in patients with no pain and also depression is likely to increase pain in cancer patients. Therefore, the addition of emotional and psychosocial components for treatment procedures and effective pain management may have positive effects on the treatment of cancer outpatients receiving chemotherapy.

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