Van Med J 32 (4):299 -307, 2025
DOI: 10.5505/vmj.2025.08769

Analysis of Demographic Data of Patients with Idiopathic Carpal Tunnel Syndrome and Evaluation of Relationship with Depression and Anxiety

Abdullah Yılgör[1], Caner Baydar[1]

Yüzüncü Yıl University, Faculty of Medicine, Department of Neurology, Van, Türkiye

Abstract

Introduction: Carpal tunnel syndrome (CTS) is the most common entrapment neuropathy. This study aimed to determine the relationship between the complaints described by patients and the functional limitations detected during neurological examinations, and electrophysiological findings. We also aimed to determine the anxiety and depression levels of patients with CTS and to evaluate the relationship between pain level, electrophysiological stage, anxiety, and depression.

Materials and methods: A total of 180 patients with idiopathic carpal tunnel syndrome with electrophysiologically diagnosed CTS were included in the study. Electrophysiologic findings of the patients were classified using the electrophysiologic staging method of the Italian study group. A visual analog scale (VAS), Beck anxiety inventory (BAI) and Beck depression inventory (BDI) were administered to all patients participating in the study. A neurologic examination was performed and Tinel and Phalen's sign, numbness, pain and awakening from sleep at night were noted.

Results: A statistically significant difference was found between patients who woke up at night due to pain related to CTS and those who did not ($p<0.05$) in terms of BMI, Beck Depression, Anxiety, and VAS measurements. The rate of night awakenings increased statistically as the CTS stage increased in patients with both right- and left-sided CTS.

Conclusion: CTS is a common syndrome especially in middle-aged and obese women and housewives. In this study, high levels of anxiety and depressive mood were found in patients with carpal tunnel syndrome.

Key words: Carpal tunnel syndrome; depression and anxiety.

Introduction

Carpal tunnel syndrome (CTS) is the most common entrapment neuropathy that anatomically often occurs with compression of the median nerve in the wrist region (1). In the wrist, entrapment is observed as a result of compression of the median nerve under the transverse carpal ligament due to increased pressure in the canal as it passes through the carpal tunnel together with the flexor tendons (1). Tenosynovitis observed in the flexor tendons is the most common etiologic cause for entrapment. As a result of compression of the median nerve in the area of entrapment, symptoms and signs such as loss of sensation in the area distal to the carpal tunnel, numbness, night pains, muscle atrophy in the tenar region, and decreased muscle strength occur (2). CTS is more frequently observed in middle-aged female patients (3). Although CTS symptoms, which are frequently seen by many clinicians, are very common in practice, the fact that they are reported as idiopathic indicates that their etiology is still unclear (4). Increase in body mass index (BMI) and secondary increase in intra-canal pressure is a serious risk factor for the development of CTS. Therefore, the relationship between obesity and CTS has frequently been the subject of research. Conditions such as age, gender, diabetes mellitus, thyroid diseases, connective connective tissue diseases, amyloidosis, acromegaly and repetitive hand movements have been frequently shown as risk factors for CTS(5). Medical treatment and physical therapy methods and in some cases surgical methods are used if necessary. Although the diagnosis of CTS is supported by the history taken from the patient and neurologic examination performed by the physician, studies such as electrophysiologic studies and in some cases radiologic examinations may be required to contribute to the diagnosis (6).

*__Corresponding Author:__ Caner Baydar___Yüzüncü Yıl Üniversitesi Tıp Fakültesi, Nöroloji Anabilim Dalı, Van, Türkiye
Bardakci/Van, Turkey 61150 **Email:** canerbaydar@hotmail.com
Orcid: Caner Baydar 0000-0002-4102-9155, Abdullah Yılgör0000-0001-8246-843X

Received: 15.07.2025, Accepted: 29.09.2025

Currently, electrophysiologic studies remain the gold standard for the diagnosis and determination of the degree of CTS. Although CTS symptoms are more frequently observed in the dominant hand, which is the hand used in daily practice, bilateral CTS is also frequently observed (5). The most common complaints of patients presenting to neurology outpatient clinics are numbness, pain, tingling sensation in the hand, pain at night and awakening from sleep due to numbness. In this study, it was planned to determine the anxiety and depression levels of patients with CTS, the correlation between CTS severity and the patient's anxiety and depressive mood scores, and the relationship between pain level, electrophysiologic stage and anxiety and depression.

Materials and Methods

This study was conducted using the data of 180 (one hundred and eighty) patients diagnosed with 'Carpal Tunnel Syndrome' by clinical evaluation and EMG (Electromyelography) among adults aged 18-65 years who applied to the electrophysiology laboratory of YYU Medical Faculty Neurology Clinic. Body mass index (BMI) in kg/m² was calculated based on demographic data such as age, gender, marital status and measurements of dominant and CTS-affected hand, height and weight of the patients included in the prospectively planned study. Patients admitted to our EMG laboratory were diagnosed with CTS based on clinical findings, physical examination and EMG evaluation. Anamnesis of the patients diagnosed with CTS as a result of electrophysiologic examinations were taken and neurologic examinations were performed. Accordingly, the presenting symptoms of pain, numbness, numbness and weakness and the localization of these symptoms (right, left, bilateral) were examined. It was noted whether the existing symptoms were affected by repetitive physical activities and whether the patients had complaints of waking up at night due to numbness and pain. Neurologic examination of the patients was performed and tinel and phalen tests, which are considered as provocative tests, were performed and the complaints of pain, numbness and waking up at night due to pain or numbness were noted. Tinel's test was detected by holding the patient's palm facing upwards and tapping the reflex hammer on the carpal tunnel. Phalen's test was considered positive in the detection of paresthesia in the sensory area of the median nerve during one minute of the position in which both elbows and wrists were flexed 90 degrees and the dorsal sides of the hand were pressed against each other. A visual analog scale (VAS) was used to rate the pain of the patients and they were asked to rate their pain from 0 to 10 and mark it with a pencil. Beck anxiety and Beck depression inventory were administered to all patients who participated in the study. Patients with cervical radiculopathy (root lesion), plexopathy, thoracic outlet syndrome and polyneuropathy, patients with previous surgery for CTS or a history of local steroid injection for CTS, patients secondary to trauma such as fracture, nerve injury, tumor and CTS secondary to pregnancy were excluded. During the data collection phase, patients were also asked whether they were currently taking any medical treatment that might affect their anxiety or depression symptoms or that might have a clinical impact on pain. Patients receiving such medical treatment were excluded from the study.

Measurement tools: Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI) and Visual Pain Scale (VAS) Rating Scale, which are tools that have been tested for validity and reliability in Turkey, were given to the patients. Beck Anxiety Inventory (BAI): It is an assessment scale consisting of 21 items used to measure the level and severity of anxiety symptoms. Each item is scored between 0 and 3 and the total is scored between 0-63. Total scores of the test were recorded as 0-7 minimal anxiety, 8-15 mild anxiety, 16-25 moderate anxiety and 26-63 severe anxiety. The validity and reliability study for the Turkish adaptation of the scale was conducted by Ulusoy et al(7). Beck Depression Inventory (BDI): It is used to determine the risk for depression and to measure the level and severity of depressive symptoms. Beck Depression Inventory (BDI) was developed by Beck and colleagues in 1961 (8). It is a self-assessment scale consisting of 21 items applied to measure the level and severity change of depression symptoms. A questionnaire form consisting of 21 questions was used in the evaluation of the BDI. Patients were asked to choose the most appropriate situation for themselves from these questions. Each item receives a score between 0 and 3 and the total score ranges between 0 and 63. According to the scores obtained from the BDI, Beck et al. categorized depression levels as follows: 0-13 points no depression, 14-19 points low depression, 20-28 points moderate depression, 29-63 points high depression. The reliability andvalidity study of the scale in Turkish culture was conducted by Hisli (9).

Pain level: Pain assessment at rest and during activity was performed using VAS and the meanings of the numbers placed from 0 to 10 on a

Table 1: Distribution of Demographic Characteristics

		n(%)
Gender	Male	42(23.3)
	Woman	138(76.7)
Marital Status	Married	156(86.7)
	Single	24(13.3)
Education Status	Can read and write	63(35.0)
	Primary School	69(38.3)
	Middle School	12(6.7)
	High School	20(11.1)
	University	16(8.9)
Profession	Housewife Other	150(83.3)
		30(16.7)

Table 2: Test of Normality of Descriptive Statistics of Numerical Measurements

	n	Min-Max(M)	Mean±ss	skewness	Kurtosis
Age	180	18-70(40)	40.42±11.83	0.267	-0.631
Boy	180	150-181(163)	164.52±7.15	0.230	-0.894
Weight	180	50-100(70)	70.56±10.99	-0.109	-0.682
BMI	180	17.3-34.6(26.4)	26.07±4	-0.021	-0.703
Beck Depression	180	2-51 (11)	14.46±10.42	1.415	1.854
Beck Anxiety	180	1-45(10)	11.98±9.05	1.140	1.276
VAS	180	0-10(5)	5.35±2.05	-0.265	-0.089

Mean+SD

10 cm line were explained. No pain was recorded as 0, unbearable pain as 10, and moderate pain as 5 points. According to these explanations, they were asked to mark their pain on a 10 cm line.

Electrophysiologic evaluation: Nihon Kohden MEB-9400K (Nihon Kohden, Korp, Tokyo, Japan, 2011) was used for EMG study and patient evaluation. In our EMG laboratory, the filter setting was set between 20 Hz and 10 kHz for motor conduction studies, stimulation frequency was 1 Hz and stimulation duration was 0.2 msec; for sensory conduction studies, the filter setting was set between 20 Hz and 2 kHz, stimulation frequency was 1 Hz and stimulation duration was 0.2 msec. As in routine EMG examinations, the room temperature was kept at an average of 25 degrees Celsius and the skin temperature between 31-34°C during the procedure. The recommendations of the American Society of Electrodiagnostic Medicine were used for our electrophysiologic examinations (10). Throughout the study, upper extremity nerve conduction studies were performed using standard techniques of supramaximal percutaneous stimulation with a current stimulator and recording surface electrode. Median and ulnar sensory conduction was measured antidromically by placing recording electrodes on the 2nd and 5th fingers and stimulating electrode on the wrist, respectively, and median-ulnar peak latency was recorded from the 4th finger. Median nerve motor conduction study was recorded from the abductor pollicis brevis muscle and ulnar nerve motor conduction study was recorded from the abductor digiti minimi muscle and distal latency, amplitude and nerve conduction velocity were calculated. Although there are various reports on CTS staging in the literature, no clear method has been established in this regard (11). In our study, electrophysiologic findings were classified by the staging method of the Italian CTS study group, which is also frequently used in the literature (11).

Ethical approval: Ethical approval was obtained for the study from the local ethics committee. (approvalnumber:B. 05.04.2023, Decision no: 03)

Statistical analysis: Data were analyzed with SPSS 27.0 program and 95% confidence level was used. Frequency (n) and percentage (%) statistics were given for categorical (qualitative) variables and mean (X), standard deviation (SD), minimum, maximum, median (M) statistics were given for numerical (quantitative) variables. In the study,

Table 3: Distribution of Clinical Characteristics

		n(%)
Additional Disease	Yes	70(38.9)
BMI	Weak	3(1.7)
	Normal	68(37.8)
	Overweight	74(41.1)
	Obese	35(19.4)
Disease Name	Arthritis	15(21.4)
	Other	15(21.4)
	DM	13(18.6)
	DM+HT	6(8.6)
	Hypothyroidism	5(7.1)
	HT	15(21.4)
	RA	1(1.4)
Dominant Hand	Right	165(91.7)
	Left	15(8.3)
Application Complaint	Pain	47(26.1)
	Pain+ Tenar Atrophy	4(2.2)
	Numbness+ Pain	47(26.1)
	Numbness+ Pain, Tenar Atrophy	7(3.9)
	Numbness	71(39.4)
	Numbness + Tenar Atrophy	1(0.6)
	Combustion	3(1.7)
Awakening from Sleep at night	Yes	44(24.4)
	No	136(75.6)
Repetitive Activities	Using a computer	11(6.1)
	Doing housework	33(18.3)
Symptomatic Hand	Right	77(42.8)
	Left	48(26.7)
	Bilateral	55(30.6)
Tinel Test	Negative	103(57.2)
	Positive	77(42.8)
Phalen Test	Negative	135(75.0)
	Positive	45(25.0)
CTS	Right	81(45.0)
	Left	45(25.0)
	Right and Left	54(30.0)
CTS Right (Stage)	No	45(25.0)
	Phase 1	58(32.2)
	Phase 2	52(28.9)
	Phase 3	20(11.1)
	Phase 4+5	5(2.8)
CTS Left (Stage)	No	81(45.0)
	Phase 1	44(24.4)
	Phase 2	36(20.0)
	Phase 3	13(7.2)
	Phase 4+5	6(3.3)

the relationship between grouped variables was analyzed by Chi-square test, and the differences of numerical variables according to groups were analyzed by independent groups t and one-way ANOVA test. The relationship between age and measurements was analyzed by Pearson correlation test. The test used to determine the relationship between two categorical variables is Chi square. The test used to compare a numerical variable according to groups (2 groups) is the independent samples t test. The test used to compare a numerical variable according to groups (more than 2 groups) is one-way ANOVA test. Pearson Correlation is the test used to determine the direction and severity of the relationship between numerical variables.

Results

The study included 180 patients who were examined in our EMG laboratory. 23.3% of the patients were male and 76.7% were female. 86.7% were married and 13.3% were single. Regarding educational level, the majority (38.3%) were primary school graduates and 8.9% were university graduates. The majority of the cases (83.3%) were housewives, while 16.7% were employed in other professions. (Table-1 Demographic data) The mean age was 40.42 years and the mean BMI was 26.07. (Table-2 Analysis of numerical measurements) When BMI values were analyzed, the majority of our sample group was overweight or obese. 38.9% of the patients had comorbidities. The most common comorbidity was arthritis (21.4%). 91.7% of the patients were right-handed and 8.2% were left-handed. In the clinical history, the most common presenting complaint was "numbness" (39.4%). 24.4% of the patients stated that they hadcomplaints of waking up from sleep at night. 18.3% of the patients stated that they had hand complaints as a result of repetitive activity while doing housework and 6.1% while using a computer. While there were 77 cases with right hand CTS involvement, bilateral CTS was found in 55 cases. The majority of cases were found to have stage 1 and stage 2 CTS (Table-3 Distribution of Clinical Characteristics). There was a statistically significant difference in BMI, Beck Depression, Anxiety, VAS measurements between those who woke up at night and those who did not ($p<0.05$). BMI (28.22), Beck Depression (19.73), Anxiety (17.49), VAS (7.6) measurements were higher in patients who woke up from night sleep compared to patients who did not wake up from night sleep (Table 4). In patients with both right-sided and left-sided CTS, the rate of nocturnal awakenings increased statistically as the CTS stage increased (Table 5).

Discussion

In studies on epidemiologic and demographic data in carpal tunnel syndrome, it was found that gender and age were associated with CTS as independent risk factors and the frequency of CTS increased with aging (12). Carpal tunnel syndrome is generally seen in a wide age range between 30 and 65 years in studies on the age of occurrence (13) and in the study conducted by Phalen et al. in 654 patients, it was reported that 58% of the patients were between 40-60 years and 78% were between 40-70 years (13). Considering the gender relationship with CTS, it has been reported that CTS is seen 2 to 10 times more frequently in women (14). In our study, the mean age of onset was found to be 40.42 years, consistent with the age range reported in the literature, and 76.7% of our patients were female. Although there is no study evaluating the relationship between CTS and education level and marital status, when the data in studies conducted in patients with CTS were examined, it was found that the mean years of education was 5.5-7.5 years and 46% had at least 5 years of education and 34.4-95.2% were married (15). In our study, the highest rate (38.3%) was found in the group with 5-11 years of education and the marital status of 86.7% of the patients was found to be married. Although carpal tunnel syndrome occurs in the dominant hand, which is frequently used in daily activities, it can frequently be seen bilaterally (16). The reason for its occurrence in the dominant hand may be related to the fact that it is frequently preferred for daily use and the dominant side carpal tunnel is anatomically narrower. In our sample group, right hand CTS was found with a rate of 45% and bilateral CTS was found with a rate of 30% in accordance with the literature. In daily practice, even if the patient presenting with CTS has unilateral complaints, the evaluations should be bilateral. Bagatur et al. In their study of 131 patients with CTS, it was observed that 59% of the patients who underwent surgery had bilateral CTS involvement and according to electrophysiologic measurements, 66% had simultaneous onset in both hands, while 73% had unilateral onset and postoperative onset in the other hand (16). In studies in which etiologic screening was performed in patients with carpal tunnel syndrome, it was found that diabetes mellitus, obesity, thyroid dysfunction, rheumatoid arthritis and osteoarthritis were evaluated as a risk factor, and also connective tissue diseases such as

Table 4: Comparison of BMI, Beck Depression, Beck Anxiety, and VAS measurements according to Nighttime Sleep Awakening Status

	Awakening from Sleep at Night		p
	No	Yes	
	Mean+SD	Mean+SD	
BMI	25.37±3.86	28.23±3.68	0.001*
Beck Depression	12.89±9.48	19.3±11.78	0.002*
Beck Anxiety	10.38±7.12	16.91±12.2	0.001*
VAS	4.63±1.69	7.57±1.35	0.001*

*p<0.05 significant difference, p>0.05 no significant difference; dependent group t test

Table 5: Comparison of CTS stages according to waking up from sleep at night

		Awakening from Sleep at Night		p
		No	Yes	
		n(%)	n(%)	
CTS Right (Stage)	No	31(22.8)	14(31.8)	0.001*
	Phase1	57(41.9)	1(2.3)	
	Phase2	38(27.9)	14(31.8)	
	Phase3	9(6.6)	11(25.0)	
	Phase 4+5	1(0.7)	4(9.1)	
CTS Left (Stage)	No	62(45.6)	19(43.2)	0.001*
	Phase1	39(28.7)	5(11.4)	
	Phase2	28(20.6)	8(18.2)	
	Phase3	6(4.4)	7(15.9)	
	Phase 4+5	1(0.7)	5(11.4)	

acromegaly, mucopolysaccharidoses, and chronic renal failure were found to be more common (17,18) In the literature, it has been claimed that hydrostatic pressure caused by an increase in the amount of fat around the median nerve in patients with excess body weight causes slowing of sensory conduction in EMG examination. In studies conducted on this subject, it has been reported that obesity is an independent risk factor for CTS and 70% of cases are obese (17,18). In studies conducted in obese patients with this hypothesis, it was found that the amount of adipose tissue acting as support around the nerve trunk increased in people with high BMI and this situation narrowed the carpal canal and posed a risk in the development of entrapment neuropathy (19,20). In another retrospective study, 720 patients were analyzed and it was found that BMI values were significantly higher in patients with CTS compared to those without CTS (21). In our study, the mean BMI value of our patients was found to be 26.07 kg/m², which is similar to the literature. In addition, correlation analyses showed that as the CTS stage increased in both the right and left hand, BMI values also increased with statistical significance. Our results supported the relationship between obesity and CTS risk. Diabetes Mellitus (DM), hypothyroidism and the presence of arthritis have been studied most frequently in etiologic epidemiologic studies. In these studies, DM was reported with a rate of 2.2-22%, hypothyroidism with a rate of 2.3-4% and arthritis with a rate of 1-2.1% (22). In our study, the presence of these diseases was found similar to the rates reported in the literature. Recently, the presence of daily routine repetitive movements such as occupational and hobby activities, which are frequently mentioned as local factors in the etiology of CTS, have been studied(23). In these studies, it has been reported that microtraumas

caused by repetitive movements constitute an important risk in the development of CTS (23). It has been reported that the risk of CTS development increases in activities associated with computer use, hobby activities and excessive flexion and extension of the hand used in daily activities, jobs requiring high force application and the use of vibrating tools, and especially the frequency and duration of repetitive movements are the most important risk factors in the data. We think that hobby activities such as handicraft making may also be effective in the development of CTS. We think that the missing aspect of our study is that the time spent on these activities and housework was not determined and recorded in detail. In a study by Keklikolu et al., the relationship between electrophysiologic characteristics and pain was examined and no statistically significant result was obtained (24). At the same time, the frequency and number of nocturnal awakenings were statistically significantly higher in patients with higher VAS values (Table 4). The reason for this result is that electrophysiological studies, the most commonly used method to support the diagnosis of CTS, test only the thick fibers passing through the carpal tunnel. Fine fibers are not evaluated through this test. Pain is a complaint that occurs when thin fibers are affected. It was thought that VAS scores may have increased in patients with advanced CTS due to the fact that the involvement of thin fibers was severely affected along with thick fiber involvement. In addition, these nerve conduction studies only measure permanent nerve damage and cannot show transient nerve damage that occurs in the early stage of CTS (25). For these reasons, the recorded conduction studies are only the findings of thick fibers and permanent damage in these fibers. In this study, depression and anxiety scores were found to be high in patients with CTS (Table2). Although these results suggest that anxiety, depression and sleep problems may be experienced more in CTS patients compared to healthy individuals, it can be interpreted that these problems cannot be explained by CTS alone. Similarly, when our study data analyzed for pain intensity and frequency of nocturnal awakenings were analyzed, it was observed that cases with high CTS stage and high VAS values had higher rates of nocturnal awakenings, probably secondary to pain (Table 4). It is thought that if the relationship between CTS and psychiatric problems is investigated, other reasons not related to the disease (e.g. psychosocial factors, quality of life) should also be taken into account. In other words, while knowing one's illness can be considered a sufficient reason for feeling worse, the fact that the symptoms of the illness are found to be more severe through the recorded materials does not affect this perception in a more negative way. In this case, rather than the severity of the disease, the subjective evaluation of the problems experienced due to the disease and its impact on one's life should be taken into account. In this respect, the aboveaverage scores for anxiety and depressive mood in our study cannot be explained by the presence of isolated CTS, and it should be kept in mind that sleep quality and activities of daily living may deteriorate as the presence and severity of CTS increases. Patients with Carpal Tunnel Syndrome often wake up at night due to pain and numbness of the affected hand and fingers (nocturnal paresthesia). These patients complain more of poor sleep quality, interruption of night sleep and consequent daytime sleepiness (26). One of the shortcomings of our study is that there were no planned and organized psychiatric interviews to assess whether the patients had any psychiatric diagnosis and the effect of life events that may affect anxiety, depression or sleep quality was not evaluated. In a study by Pogorzelski et al. the data of patients with CTS and control group were compared (27). No difference was found between the groups in terms of the frequency of anxiety and depression. There was a correlation between symptoms such as pain and numbness, which are common in CTS, and anxiety and depression. It was also concluded that anxiety and depression increased as the severity of CTS increased (27). In a study conducted by Tekeoğlu et al. to determine sleep quality and depression and anxiety findings in CTS patients, depression and anxiety levels of patients with CTS were found to be higher compared to the control group, while sleep quality was found to be lower (28). The study could have been made more detailed by filling in sleep quality indices. In the study by Gül et al. in which they aimed to investigate the relationship between CTS and anxiety and its effect on sleep disorders, they applied UAE, Hamilton Anxiety Rating Scale and Epworth Sleepiness Scale to patients diagnosed

development of CTS (23). These studies have been conducted on people who use their hands in the foreground such as mechanics, machine operators, butchers, drivers, managers and secretaries.In three studies conducted in housewives in the literature, a relationship between housework and CTS was reported (23). In our study, the rate of housewives was found to be 76.7% and the rate of doing handicraft was found to be 18.3% in the occupational analysis

with CTS. It was suggested that the mean BAI scores were higher than the general mean in patients with CTS and as a result, anxiety level was high in patients with CTS (29). In our study, the mean BAI score was 11.98 (compatible with mild anxiety) (Table-2). The BAI measures the anxiety level of the person. The higher the BAI score, the higher the anxiety level of the person. Since we did not use a scale to diagnose anxiety disorder in our study and there was no control group to compare the anxiety level found, we thought that it would not be a correct statement to make statements such as anxiety level is high in patients with CTS or anxiety disorders are common in patients with CTS. Likewise, the mean BDI score was found to be 14.46. 14.46 was found. Similarly, it was a result compatible with mild depression (Table-2). In our study, we also evaluated the relationship between electrophysiologically determined stages, obesity (BMI), VAS, UAE, BDI scores and clinical staging in CTS patients.

Study limitations: Evaluation of the severity of CTS is an important step for prognosis and treatment planning. Limitations of our study include the fact that more complex systems could not be used in clinical staging, for example symptom scales could have been used. In conclusion, in this study, the presence of manual or hobby activities and high BMI were considered as risk factors for the presence and severity of CTS. In addition, the observation that electrophysiologic findings progressed similarly with the severity of clinical findings suggests that nerve conduction studies provide important information in the diagnosis and evaluation of CTS severity.

Conclusion

Carpal tunnel syndrome is the most common syndrome among entrapment neuropathies. It results in motor and sensory impairment of the median nerve in the wrist region. Clinical findings include nocturnal pain, paresthesia, weakness and in severe cases atrophy of the tenar region. The diagnosis of carpal tunnel syndrome is based on history, physical examination findings and electrophysiologic support of these findings. Conservative and surgical methods are used in the treatment of carpal tunnel syndrome. In conclusion, CTS is a common syndrome especially in middle-aged and obese women and housewives. Although many causes have been identified in its etiology, it is still highly idiopathic. More detailed studies are needed to determine the etiology in our society, especially in housewives. In our region, CTS is more common in middle-aged, obese, married housewives with low education and moderate income. We found that CTS is generally not accompanied by additional systemic diseases, bilateral involvement is high, and when the disease becomes chronic and the severity increases, the frequency of pain and awakening from sleep at night increases. In this study, in which especially the socio-demographic data of CTS were examined in detail, we think that knowing the community-specific profile well will contribute to the treatment process. In chronic diseases such as Carpal Tunnel Syndrome, it should be taken into consideration that accompanying psychiatric disorders such as anxiety and depression negatively affect the quality of life of patients, reduce the response to treatment and patients' satisfaction with treatment. Therefore, comorbid psychiatric disorders should be recognized early and measures should be taken to address them.

Ethical approval: Ethical approval was obtained for the study from the local ethics committee. (approvalnumber:B. 05.04.2023, Decision no: 03)

Conflict of interest statement: The authors declare no conflict of interest.

Financial support: This study was not supported by any funding.

References

1. Tunç A, Doğan Güngen B. Evaluation of the relationship between electrodiagnostic staging and clinical stage, symptom duration, and body mass index in patients with carpal tunnel syndrome. Dicle Med J 2017;44(2):159-166.
2. Rosenbaum R. Carpal tunnel syndrome. In: Johnson RT, Griffin WJ, editors. Current therapy in neurologic disease. 5th ed. St. Louis (MO): Mosby-Year Book; 1997. p. 374-377.
3. D'Arcy CA, McGee S. The rational clinical examination: does this patient have carpal tunnel syndrome? JAMA 2000; 283(23):3110-7.
4. Uchiyama S, Itsubo T, Nakamura K, Kato H, Yasutomi T, Momose T. Current concepts of carpal tunnel syndrome: pathophysiology, treatment and evaluation. J Orthop Sci 2010;15(1):1-13.
5. Karpitskaya Y, Novak CB, Mackinnon SE. Prevalence of smoking, obesity, diabetes mellitus, and thyroid disease in patients with carpal tunnel syndrome. Ann Plast Surg 2002;48(3): 269-273.
6. Bengston KA, Brault JS. Hand disorders. In: DeLisa JA, editor. Physical medicine &

rehabilitation principles and practice. 3rd ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2005. p. 843-854.
7. Ulusoy M, Sahin NH, Erkmen H. Turkish version of the Beck Anxiety Inventory: psychometric properties. J Cogn Psychother 1998;12(1):163-172.
8. Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. Arch Gen Psychiatry 1961;4:561-571.
9. Hisli N. Beck depresyon envanterinin üniversite öğrencileri için geçerliliği, güvenilirliği. Psikoloji Dergisi 1989;7:3-13.
10. Werner RA, Andary M. Electrodiagnostic evaluation of carpal tunnel syndrome. Muscle Nerve 2011;44(4):597-607.
11. Padua L, LoMonaco M, Gregori B, Valente EM, Padua R, Tonali P. Neurophysiological classification and sensitivity in 500 carpal tunnel syndrome hands. Acta Neurol Scand 1997;96(4):211-217.
12. Lam N, Thurston A. Association of obesity, gender, age and occupation with carpal tunnel syndrome. Aust N Z J Surg 1998;68(3):190-193.
13. Phalen GS. The carpal tunnel syndrome: 17 years' experience in diagnosis and treatment of 654 hands. J Bone Joint Surg Am 1966;48:211-228.
14. Mondelli M, Aprile I, Ballerini M, Ginanneschi F, Reale F, Romano C, et al. Sex differences in carpal tunnel syndrome: comparison of surgical and non-surgical populations. Eur J Neurol 2005;12(12):976-983.
15. Umay E, Polat S, Ünlü E, Çelik Ö, Çakcı A. Demographic characteristics of our patients with carpal tunnel syndrome. J Clin Anal Med 2011;2(3):63-65.
16. Bagatur AE, Zorer G. The carpal tunnel syndrome is a bilateral disorder. J Bone Joint Surg Br 2001;83(5):655-658.
17. Geoghegan JM, Clark DI, Bainbridge LC, Smith C, Hubbard R. Risk factors in carpal tunnel syndrome. J Hand Surg Br 2004;29(4):315-320.
18. Moghtaderi A, Izadi S, Sharafadinzadeh N. An evaluation of gender, body mass index, wrist circumference and wrist ratio as independent risk factors for carpal tunnel syndrome. Acta Neurol Scand 2005;112(6):375-379.
19. Şahin N, Albayrak İ, Uğurlu H. Obez hastalarda karpal tünel sendromunun şiddeti ve vücut kitle indeks değerleri arasındaki ilişki. TUBAV Bilim Derg 2009;2(4):484-488.
20. Sungpet A, Suphachatwong C, Kawinwonggowit V. The relationship between body mass index and the number of sides of carpal tunnel syndrome. J Med Assoc Thai 1999;82(2):182-185.
21. Werner RA, Albers JW, Franzblau A, Armstrong TJ. The relationship between body mass index and the diagnosis of carpal tunnel syndrome. Muscle Nerve 1994;17(6): 632-636.
22. Armstrong T, Dale AM, Franzblau A, Evanoff BA. Risk factors for carpal tunnel syndrome and median neuropathy in a working population. J Occup Environ Med 2008;50(12):1355-364.
23. Violante FS, Armstrong TJ, Fiorentini C, Graziosi F, Risi A, Venturi S, et al. Carpal tunnel syndrome and manual work: a longitudinal study. J Occup Environ Med 2007;49(11):1189-1196.
24. Dönmez Keklikoğlu H, Çolpak Aİ, Solak EB, Yoldaş TK. Karpal tünel sendromunda ağrı ve elektrofizyolojik bulgular. Turk J Neurol 2009;15(4):188-193.
25. Nishimura A, Ogura T, Hase H, Makinodan A, Hojo T, Yasukazu Y, et al. Objective evaluation of sensory function in patients with carpal tunnel syndrome using the current perception threshold. J Orthop Sci 2003;8:625-628.
26. Lehtinen I, Kirjavainen T, Hurme M, Lauerma H, Martikainen K, Rauhala E. Sleep-related disorders in carpal tunnel syndrome. Acta Neurol Scand 1996;93(5):360-365.
27. Pogorzelski R, Kułakowska A, Halicka D, Drozdowski W. Neurological and emotional profile of carpal tunnel syndrome patients. Przegl Lek 2011;68(5):269-273.
28. Tekeoğlu İ, Gülcü E, Sayın R, Beşiroğlu L, Yazmalar L. Karpal tünel sendromunda uyku kalitesi ile depresyon ve anksiyete bulgular. Turk J Phys Med Rehabil 2008;54(3):102-106.
29. Gül Aİ, Alp R, Özcan Ç, Palancı Y. Karpal tünel sendromu ve anksiyete ilişkisi ve bunun uyku bozuklukları üzerine etkisi. Harran Univ Med J 2008;5(3):16-20.