



The Relation of Disease Characteristics with Type D Personality and Illness Perception in Patients with Gout

Gut Hastalarında Hastalık Özelliklerinin D Tipi Kişilik ve Hastalık Algısı ile İlişkisi

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ABSTRACT

Aim: The aim of this study was to evaluate type D personality and its relationship with illness perception and other disease parameters in patients with gout.

Materials and Methods: The study included 59 patients with gout who met the eligibility criteria and a control group of an equal number of relatively healthy individuals. Type D personality and psychological evaluation of all participants were assessed with the Type D Personality Scale (DS14) and Beck Depression Inventory (BDI), respectively. The Brief Illness Perception Questionnaire (B-IPQ) was used to evaluate patients' illness perception.

Results: The median age of the patients was 48 years (20); 79.7% were male. The frequency of type D personality was 30.5% in patients with gout, and this rate was higher than that in healthy controls (13.5%) ($p=0.026$). Patients with type D personality had higher numeric rating scale-pain (NRS-pain), C-reactive protein, erythrocyte sedimentation rate, Gout Activity Score (GAS), BDI, and B-IPQ scores than those without type D personality. A significant positive moderate-strong correlation (Spearman's rho ranged from 0.525 to 0.753) was found between the B-IPQ score and the tender joint count, NRS-pain, GAS, BDI, DS14 total score, social inhibition, and negative affectivity subscale scores.

Conclusion: The results of our study showed that type D personality was associated with negative illness perception, psychological health, perceived pain severity, and disease activity in individuals with gout. In this context, it supports the possibility that assessing personality traits, interventional planning, and education that change disease perception may be an effective strategy to improve health outcomes in patients with gout.

Keywords: Gout, type D personality, negative affectivity, illness perception, disease activity

ÖZ

Amaç: Bu çalışmanın amacı gut hastalarında D tipi kişiliği ve bu kişilik tipinin hastalık algısı ve diğer hastalık parametreleri ile ilişkisini değerlendirmektir.

Gereç ve Yöntem: Çalışmaya uygunluk kriterlerini karşılayan 59 gut hastası ve aynı sayıda görece sağlıklı bireyden oluşan bir kontrol grubu dahil edildi. Tüm katılımcılarda D tipi kişilik varlığı ve psikolojik değerlendirmeler sırasıyla D Tipi Kişilik Ölçeği (D14) ve Beck Depresyon Ölçeği (BDÖ) ile değerlendirildi. Hastaların hastalık algılarını değerlendirmek için Kısa Hastalık Algısı Ölçeği (KHAÖ) kullanıldı.

Bulgular: Hastaların ortanca yaş değerleri 48 (20) olup %79,7'si erkek idi. Gut tanılı hastalarda D tipi kişilik görülme oranı %30,5 olup bu oran sağlıklı kontrollere (%13,5) göre yüksekti ($p=0,026$). D tipi kişiliğe sahip gut tanılı hastaların numerik ağrı derecelendirme ölçeği (NRS-ağrı), C-reaktif protein, eritrosit sedimentasyon hızı, Gut Aktivite Skoru (GAS), BDÖ ve KHAÖ skorları, D tipi kişiliğe sahip olmayan hastalara göre istatistiksel olarak anlamlı yüksek saptandı. KHAÖ skoru ile hassas eklem sayısı, NRS-ağrı, GAS, BDÖ, D14 total skor, sosyal içe dönüklük ve negatif duygulanım alt ölçek skorları arasında orta-güçlü pozitif korelasyon bulundu (Spearman's rho 0,525 ile 0,753 arasında değişmekte).

Sonuç: Çalışmamızın sonuçları gut tanılı bireylerde D tipi kişiliğin negatif hastalık algısı, psikolojik sağlık, algılanan ağrı şiddeti ve hastalık aktivitesi ile ilişkili olduğunu göstermiştir. Bu bağlamda gut hastalarında sağlık sonuçlarını iyileştirmek için kişilik özelliklerinin değerlendirilmesinin, hastalık algısını değiştiren müdahalelerin ve eğitim planlanmasının etkili bir strateji olma olasılığını desteklemektedir.

Anahtar Kelimeler: Gut, D tipi kişilik, negatif duygulanım, hastalık algısı, hastalık aktivitesi

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INTRODUCTION

Gout disease is one of the common causes of inflammatory arthritis, which affects 0.68–3.9% of adults in the world. It is characterized by an increase in monosodium urate in blood and deposition of monosodium urate crystals in joints, tendons and tissues. It is associated with hypertension, chronic kidney disease, obesity, diabetes and cardiovascular disease. The initial exacerbation is typically characterized by asymptomatic hyperuricemia followed by acute arthritis involving the foot/ankle joint. The acute attack is self-limiting within 1–2 weeks and the signs and symptoms of inflammation completely resolve during the so-called intercritical period. If hyperuricemia persists, polyarticular exacerbations may develop, which become increasingly frequent and may affect many joints, including the joints of the upper extremities. If left untreated, chronic gouty arthritis characterized by tofus accumulation and joint erosion which occurs as a result of recurrent arthritis attacks¹. Only 22% of patients with gout successfully reach the target serum urate level. This contributes to recurrent gout flares, reduced productivity and health-related quality of life².

The need to consider approaches to pessimistic disease perceptions in order to increase treatment compliance and improve health outcomes in patients diagnosed with gout is emphasized in the literature^{3,4}. Disease perceptions are belief and opinion patterns that an individual develops in response to a perceived health threat. It is related to how patients evaluate living with a disease⁵. According to the results of a recent study examining the relationship between disease perceptions of patients with gout and health outcomes and covering a 12-month follow-up period, it was reported that pessimistic disease perception was associated with poorer medication compliance and health-related quality of life. Accordingly, interventions that change disease perception in patients diagnosed with gout can be seen as an effective way to improve health outcomes³.

Type D personality is characterized by a personality pattern consisting of two personality traits: negative affectivity and social inhibition⁶. Individuals with type D personality tend to experience negative emotions such as distress, dissatisfaction, irritability, anxiety, and depression⁷. The prevalence of type D personality in the general population varies between 13% and 34%⁶⁻⁸. This personality type has been shown to play an important role in the clinical progression of certain diseases, such as coronary artery disease, hypertension, heart failure, and brain dysfunction. Many studies have reported the negative impact of type D personality on various health-related factors (such as quality of life and functionality)⁹⁻¹².

There are a limited number of studies in the literature that define the personality types or characteristics of patients diagnosed with gout, but no studies have been found that examine type

D personality and the relationship of this personality type with disease perception and other disease parameters in this patient group¹³⁻¹⁵. The aim of this study is to evaluate the relationship between disease characteristics and type D personality and disease perception in patients diagnosed with gout.

MATERIALS AND METHODS

This cross-sectional study included patients aged 18 years and over, under 65 years old, diagnosed with gout for at least 6 months according to the 2015 American College of Rheumatology (ACR)/European League Against Rheumatism (EULAR) Criteria, who applied to the Physical Medicine and Rehabilitation outpatient clinic, and the same number of relatively healthy individuals who applied to our outpatient clinic, matched in terms of age and gender, as the control group¹⁶. The addition of the term "relatively" to healthy controls is because some of these individuals had various non-specific musculoskeletal pain. None of the individuals included in the control group had the study exclusion criteria. Exclusion criteria from the study were determined as the presence of concomitant autoimmune inflammatory disease, having had an acute gout attack (flare) within the last 4 weeks, serious psychological disorder (e.g. psychotic disorders), concomitant neurological disease, presence of uncontrolled systemic disease and history of malignancy and alcohol/substance addiction.

Written and verbal informed consent was obtained from the patients included in the study regarding the use of their medical information, and the study was conducted in accordance with the principles of the Declaration of Helsinki. The approval obtained from the Çukurova University Faculty of Medicine Non-invasive Clinical Research Ethics Committee (decision no: 138/23, date: 3.11.2023).

Age, gender, marital status, education level, employment and annual income status, current smoking and alcohol use, and body mass index (BMI) of all participants were determined and recorded. The patients' gout-related characteristics such as diagnosis period (months), number of attacks in the last year, tender joint count (TJC), disease activity, laboratory parameters [C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and serum urate level] and pain level were evaluated. The pain felt in the last month was determined by the numerical pain rating scale (NRS-pain).

The Gout Activity Score (GAS) was used to evaluate disease activity. This scoring is calculated with a special formula using the serum urate level, number of tophi, disease severity level reported by the patient (according to the visual pain scale) and the number of attacks in the last year. Accordingly, high scores indicate high disease activity^{17,18}.

The presence of type D personality in the participants was assessed using the Type D Personality Scale (DS14). In addition to assessing type D personality (14 items), the scale also provides information about the presence of negative affect (seven items) and social inhibition (seven items). It consists of a total of 14 questions, and each item statement is scored according to five ordered categories from 0 (wrong) to 4 (correct). The negative affect and social inhibition subscales can be used as continuous parameters (0-28) to assess these personality traits separately. Scores of ≥ 10 from the subscales indicate the presence of type D personality^{6,19,20}.

The psychological status of participants was evaluated using the Beck Depression Scale (BDS). The BDS is a 21-item questionnaire in which each item is scored from 0 to 3. Minimum and maximum scores range from 0 to 63, with higher scores representing more severe depressive mood^{21,22}.

The Brief Illness Perception Questionnaire (B-IPQ) was used to assess patients' perceptions of illness. This scale consists of 9 questions that assess the cognitive and emotional representations of the illness. The total score obtained from the scale varies between 0 and 80, and an increase in the score indicates that the person is affected by the illness, perceives the illness as worrying, and has an increased negative effect^{23,24}.

Statistical Analysis

Sample size was determined using G*Power Software (Heinrich-Heine-Universität Düsseldorf, Germany). The system used "t-test means: difference between two independent means (two groups)". In the study conducted by Gokcen et al.²⁵, when DS14 was taken as the study variable, the effect size was determined as 0.61. The sample size was estimated as at least 58 for gout patients and 58 for controls, with a statistical power of 0.90 and an alpha level of 0.05. Considering the possible data loss, the sample size was increased to 59 for each group.

The obtained data were evaluated in a computer environment using the IBM SPSS Statistics for Windows, Version 26.0 package program (IBM Corp., Armonk, NY, USA). The Shapiro-Wilk test was used to evaluate the distribution of continuous variables. Categorical variables were presented as numbers and frequencies. Continuous variables were expressed as mean with standard deviation and median with interquartile range. The chi-square test was used to compare the differences between the groups (comparison of the patient and control groups and the patients with gout and without type D personality) in terms of categorical variables, and the Mann-Whitney U test or Student's t-test was used for continuous variables, depending on the distribution of the data. The possible correlation of DS14 and B-IPQ scores with clinical variables was tested with Spearman correlation analysis. The results were considered statistically significant if the p values were less than 0.05.

RESULTS

59 patients with a median age of 48 (20) and 59 relatively healthy individuals as a control group were included in the study. 20.3% of the patients were female and 79.7% were male. There was no statistically significant difference between the patient and control groups in terms of age, gender, marital status, education level, employment status, income level, smoking and BMI ($p > 0.05$). The frequency of alcohol use was significantly higher in the patient group than in the controls ($p = 0.003$). The mean DS14 scores of the patient and control groups were 18.6 ± 10.9 and 13.2 ± 7.5 , respectively, and the DS14 scores were significantly higher in the patient group ($p = 0.002$). In addition, the negative affect scores of the patient group were significantly higher than the controls ($p < 0.001$), while no significant difference was observed between the groups in terms of social withdrawal scores (Table 1).

The disease-related data of patients diagnosed with gout are shown in detail in Table 2. Accordingly, the diagnosis period of

Table 1. Comparative analysis of socio-demographic and clinical data of patients with gout and control group

Variables	Patient n=59	Control n=59	p value
Age ^a	48 (20)	48 (16)	0.823 [†]
Gender ^b			
Female	12 (20.3)	8 (13.6)	0.326 [†]
Male	47 (79.7)	51 (86.4)	
Marital status ^b			
Married	48 (81.4)	52 (88.1)	0.579 [†]
Single	9 (15.3)	6 (10.2)	
Divorced	2 (3.4)	1 (1.7)	
Level of education (years) ^a	11 (10)	11 (7)	0.529 [†]
Occupational status ^b			
Workers	40 (67.8)	51 (86.4)	0.016 [†]
Non-workers	19 (32.2)	8 (13.6)	
Annual income level (TL) ^a	102000 (102000)	168000 (228000)	0.014 [†]
Current smoking status ^b	21 (35.6)	24 (40.7)	0.570 [†]
Current alcohol consumption status ^b	18 (30.5)	5 (8.3)	0.003 [†]
BMI(kg/m ²) ^a	28.9 (5.5)	27.8 (5.1)	0.066 [†]
BDS ^a	10 (5)	4 (7)	<0.001 [†]
DS14	18.6 \pm 10.9	13.2 \pm 7.5	0.002 [*]
Type D personality + ^b	18 (30.5)	8 (13.6)	0.026 [†]
Social inhibition ^a	8 (7)	7 (6)	0.521 [†]
Negative affect ^a	11 (12)	4 (9)	<0.001 [†]

Values^a represent mean \pm SD except for median (IQR), ^bn (%).

[†]: Mann-Whitney U test, [‡]: chi-square test, ^{*}: Student's t-test

TL: Turkish Lira, BMI: Body mass index, BDS: Beck depression scale, DS14: Type D Personality scale

the patients was 36 (77) months. 69.5% of the patients had 1-3 attacks per year. The median NRS-pain values were 3 (4) and the mean GAS values were 4.3±1.0. The most common comorbidities were hypertension in 33.9% of the patients and hyperlipidemia in 15.3%. The mean B-IPQ scores were determined to be 36.1±13.3 (Table 2).

The comparative analysis of sociodemographic and clinical data of gout patients according to the presence of type D personality is given in detail in Table 3. Accordingly, NRS-pain, CRP, ESR, GAS, BDS and B-IPQ scores of patients diagnosed with gout with type D personality were found to be statistically significantly higher than those of patients without type D personality (p values 0.003, 0.014, 0.016, 0.012, respectively, and p<0.001 for BDS and B-IPQ).

The potential relationship between clinical variables was examined using Spearman correlation analysis and the results are presented in Tables 4 and 5. Accordingly, a moderate to

strong positive correlation was found between the B-IPQ score and TJC, NRS-pain, GAS, BDS, DS14 total score, social withdrawal and negative affect subscale scores (Spearman's rho ranged between 0.525 and 0.753, p<0.001 for all). In addition, a weak negative correlation was found between the B-IPQ score and education and income level (Spearman's rho ranged between -0.331 and -0.292, respectively) (Table 4). A weak to moderate positive correlation was found between the DS14 total score and TJC, NRS-pain, GAS, BDS and B-IPQ scores (Spearman's rho ranged between 0.354 and 0.642) (Table 5).

DISCUSSION

In our study evaluating the relationship between disease characteristics and type D personality and disease perception in patients with gout, the rate of type D personality was 30.5%, which was considerably higher than healthy controls (13.5%). Patients with gout had higher type D personality, negative affect and depression scores than healthy controls. In addition, this study showed that patients with type D personality had more pessimistic disease perception, increased pain intensity, higher GAS and more mental involvement. The disease perception and type D personality scores of the patient group were related both to each other and to the number of affected joints, pain level, GAS and depression scores.

Personality traits have been extensively studied to date in various musculoskeletal disorders, especially rheumatic diseases, and their effects on clinical outcomes have been reported^{9,25-27}. In the study by Donisan et al.²⁷ investigating the relationship between personality types and quality of life and GAS in patients with ankylosing spondylitis and rheumatoid arthritis, it was confirmed that type A personality was associated with better quality of life and reduced disease activity. However, types C and D personality were associated with impaired quality of life and higher GAS in patients with rheumatoid arthritis and ankylosing spondylitis. Gokcen et al.²⁵ reported that fibromyalgia patients with type D personality had lower self-esteem, worse general health status, and higher anxiety and depression levels. However, studies investigating the effects of personality traits on clinical parameters in patients with gout are quite limited, and there is no study investigating the presence and potential effect of type D personality in this patient population¹³⁻¹⁵. Pazcoguin et al.¹³ showed that there is a significant relationship between aggression, which is one of the personality trait types in individuals diagnosed with gout, and disease characteristics such as pain level, disease duration and serum urate level of the patients. The results of our current study showed that inflammatory markers (CRP and ESR) were higher in patients with type D personality. This situation can be attributed to the activation of the inflammatory process by negative affect. In support of this interpretation, GAS was found to be high in patients

Clinical variables	Patient (n=59)
Diagnosis time (months)^a	36 (77)
TJC^a	1 (0)
Number of episodes (years)^b	
0	13 (22)
1-3	41 (69.5)
>3	5 (8)
NRS-pain^a	3 (4)
Medications^b	
NSAID	9
Colchicine allopurinol	12
Allopurinol	12
Febuxostat	5
Allopurinol+colchicine	17
Allopurinol+ NSAID	4
Associated comorbidities^b	
Hypertension	20 (33.9)
Coronary artery disease	7 (11.9)
Hyperlipidemia	9 (15.3)
Chronic kidney disease	6 (10.2)
Diabetes	4 (6.8)
Nephrolithiasis	6 (8.3)
GAS	4.3±1.0
Laboratory	
CRP ^a	4.2 (5)
ESH ^a	13 (15)
Serum urate	8.2±1.8
B-IPQ	36.1±13.3
Values represent mean ± SD except for ^a median (IQR), ^b n (%).	
TJC: Tender joint count, NRS: Numerical rating scale, NSAID: Non-Steroidal Anti-Inflammatory Drugs, GAS: Gut activity score, CRP: C-reactive protein, ESR: Erythrocyte sedimentation rate, B-IPQ: Brief illness perception questionnaire	

Table 3. Comparative analysis of socio-demographic and clinical data of patients with gout according to the presence of type D personality.

Variables	Type D personality (+) n=18	Type D personality (-) n=41	p value
Age ^a	48 (22)	47 (19)	0.889 [†]
Gender ^b			
Female	6 (33.3)	6 (14.6)	0.100 [†]
Male	12 (66.7)	35 (85.4)	
Level of education (years) ^a	9.5 (10)	11 (10)	0.478 [†]
Annual income level (TL) ^a	99000 (78000)	120000 (108000)	0.447 [†]
Current smoking status ^b	8 (44.4)	13 (31.7)	0.347 [†]
Current alcohol consumption status ^b	5 (27.8)	13 (31.7)	0.763 [†]
BMI (kg/m ²) ^a	30.2 (7.5)	28.7 (5.7)	0.256 [†]
Diagnosis time (months) ^a	20.5 (50)	51 (105.5)	0.174 [†]
Number of gout attacks (in the last 12 months) ^b			
0	2 (11.1)	11 (26.8)	0.175 [†]
1-3	13 (72.2)	28 (68.3)	
>3	3 (16.7)	2 (4.9)	
TJC ^a	1 (0.3)	1 (1)	0.105 [†]
NRS-pain ^a	5 (3)	2 (3)	0.003 [†]
CRP ^a	7.8 (6)	4 (3.2)	0.014 [†]
ESR ^a	19 (13)	10 (13)	0.016 [†]
Serum urate	8.1±2.1	8.2±1.7	0.953 [*]
GAS	4.7±1.1	4.04±0.8	0.012 [*]
BDS ^a	13.5 (6.5)	8 (5.5)	<0.001 [†]
B-IPQ	46.2±10.4	31.7±12.0	<0.001 [*]

Values ^a represent mean ± SD except for median (IQR), ^bn (%).

[†]: Mann-Whitney U test, ^{*}: Chi-square test, ^{*}: Student's t-test

BMI: Body mass index, TJC: Tender joint count, NRS: Numerical rating scale, CRP: C-reactive protein, ESR: Erythrocyte sedimentation rate, GAS: Gut activity score, BDS: Beck depression scale, B-IPQ: Brief illness perception questionnaire

Table 4. Correlation of B-IPQ score with clinical variables

	B-IPQ	
	Spearman's rho	p value
Age	0.089	0.505
Diagnosis time (months)	-0.164	0.216
Level of education (years)	-0.331	0.010
Income level	-0.292	0.025
BMI (kg/m ²)	0.118	0.373
TJC	0.553	<0.001
NRS-pain	0.753	<0.001
CRP	0.048	0.717
ESR	0.281	0.031
Serum urate	0.228	0.082
GAS	0.731	<0.001
BDS	0.750	<0.001
DS14	0.611	<0.001
Social inhibition	0.525	<0.001
Negative affect	0.582	<0.001

BMI: Body mass index, TJC: Tender joint count, NRS: Numerical rating scale, CRP: C-reactive protein, ESR: Erythrocyte sedimentation rate, GAS: Gut activity score, BDS: Beck depression scale, B-IPQ: Brief illness perception questionnaire, DS14: Type D personality scale

Table 5. Correlation of DS14 total score with clinical variables

	DS14	
	Spearman's rho	p value
Age	0.004	0.967
Diagnosis time (months)	-0.101	0.446
Level of education (years)	-0.176	0.056
Income level	-0.256	0.005
BMI (kg/m ²)	0.154	0.097
TJC	0.354	0.006
NRS-pain	0.469	<0.001
CRP	0.219	0.096
ESR	0.175	0.185
Serum urate	-0.036	0.789
GAS	0.417	0.001
BDS	0.642	<0.001
B-IPQ	0.611	<0.001

BMI: Body mass index, TJC: Tender joint count, NRS: Numerical rating scale, CRP: C-reactive protein, ESR: Erythrocyte sedimentation rate, GAS: Gut activity score, BDS: Beck depression scale, B-IPQ: Brief illness perception questionnaire, DS14: Type D personality scale

with type D personality in our study and negative affect was higher in the patient group compared to the control group. It has also been shown that type D personality is associated with disease perception, depression, GAS and pain scores. Patients may evaluate self-reported measurements such as disease activity, functional impairment and pain perception more exaggeratedly than they actually are regarding their personality characteristics. This suggests that the differences between patients with similar clinical presentation may be partly related to personality characteristics²⁸. Therefore, it is valuable for clinicians to consider personality characteristics in the clinical evaluation and management of these patients.

Illness perceptions are opinions and beliefs formed in response to a health threat that may affect a person's self-management behaviors and chronic disease outcomes⁵. Research supports the idea that illness perception is associated with mortality and many health outcomes in individuals with gout^{3,29,30}. Selvadurai et al.³ reported that pessimistic or negative illness perception in patients with gout is associated with poor medication adherence, impaired quality of life, and decreased work productivity. They also reported that patients' pessimistic illness perceptions are associated with more severe illness characteristics. On the other hand, a similar relationship could not be demonstrated with serum urate levels. The results of our study, consistent with existing evidence, showed that negative illness perception is associated with higher disease activity, increased pain levels, and the number of joints affected. However, no relationship was observed between serum urate levels and CRP and illness perception.

Another important finding of our study is the positive relationship between the disease perception of patients with gout and the presence of type D personality, negative affectivity and social inhibition. Literature overview revealed, the relationship between personality traits and disease perception in various diseases has been investigated³¹⁻³⁵. However, no study investigating this relationship in patients with gout has been found. A study conducted on patients with myocardial infarction reported that the disease perception profile of patients with type D personality showed a statistically significant difference compared to those without type D personality³¹. Another study conducted on peritoneal dialysis patients reported a strong relationship between type D personality, disease perception, social support and quality of life³². These results support the possibility that evaluating personality traits, planning interventions that change disease perception and education are effective strategies to improve health outcomes in patients with gout.

Study Limitations

This study has some limitations and strengths. One of the most important strengths of this study is the comprehensive evaluation of the relationship between type D personality and its subdomains and many health-related outcomes including disease perception and GAS in patients with gout. Its cross-sectional design is one of its limitations as it cannot establish any cause-effect relationship. Fluctuations in the relevant parameters and definite relationships can be revealed with longitudinal studies. In addition, other personality types were not evaluated in the study. In addition, no comparisons were made with other inflammatory rheumatic diseases. Another limitation is that most of the selected questionnaires were subjective and possess a risk of bias.

CONCLUSION

This study showed that approximately one third of individuals diagnosed with gout have type D personality, and type D personality is associated with many variables such as negative illness perception, psychological health, perceived pain intensity and disease activity. These findings suggest that illness perception may have a potential role in explaining the negative effects of type D personality on various health parameters in patients with gout. In this context, it would be appropriate to consider these close relationships when treating these individuals. Patient education, coping strategies and psychological interventions should be considered as an integral part of the treatment algorithm. Further studies with longer follow-up period should be conducted to fully elucidate these relationships in a more comprehensive and objective manner.

Ethic

Ethics Committee Approval: The approval obtained from the Çukurova University Faculty of Medicine Non-invasive Clinical Research Ethics Committee. (decision no: 138/23, date: 3.11.2023). The study was conducted in accordance with the principles of the Declaration of Helsinki.

Informed Consent: Written informed consent to participate were included in our study.

Authorship Contributions

Surgical and Medical Practices: A.S., İ.C.B., K.T., A.Y., E.K., Concept: A.S., İ.C.B., K.T., E.K., Design: A.S., İ.C.B., K.T., A.Y., E.K., Data Collection or Processing: A.S., İ.C.B., K.T., A.Y., E.K., Analysis or Interpretation: A.S., İ.C.B., Literature Search: A.S., İ.C.B., E.K., Writing: A.S., İ.C.B.

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