



KANSER DIŐI AĐRI İLE ALGOLOJİ KLİNİĐİNE BAŐVURAN YAŐLI HASTALARIN DEĐERLENDİRİLMESİ

THE EVALUATION OF ELDERLY PATIENTS ADMITTED TO ALGOLOGY CLINIC FOR NON-CANCER PAIN

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Özet

Amaç: YaŐlı nüfus oranındaki yükseliŐ ile birlikte yaŐlı hastaların aĐrı tedavi gereksinimleri de artmaktadır. Bu yazıda, 65 yaŐın üzerindeki kanser olmayan nedenlerden dolayı aĐrı Őikayeti ile baŐvuran hastaların klinik özelliklerini sunmayı amaçladık.

Materyal ve Metot: Selçuk Üniversitesi Tıp Fakültesi Algoloji KliniĐine 01.01.2010 ve 31.05.2018 tarihleri arasında baŐvuran 65 yaŐ üstü 642 hastanın verileri analiz edildi. Veriler yaŐ gruplarına göre üç gruba ayrıldı: Grup I (65-75 yaŐ), Grup II (76-85 yaŐ) ve Grup III (86 yaŐ ve üstü).

Bulgular: Hastaların medyan yaŐı 72 (IQR: 67-78) idi ve % 62,8'i (n = 403) kadındı. Algoloji kliniĐine aĐrı ile baŐvuran 65 yaŐ üstü hastalarda en sık görülen aĐrı türü mekanik aĐrı idi (% 54,9). GiriŐimsel tedavi hastaların % 39,9'una uygulandı. Tedaviye cevap cinsiyet ve yaŐ grupları aŐısından karŐılaŐtırıldıĐında fark bulunmadı.

Sonuç: Algoloji kliniĐine baŐvuran yaŐlı hastalarda klinik özelliklerini belirleyerek daha hızlı ve etkili bir aĐrı tedavisi saĐlanabilir.

Anahtar Kelimeler: AĐrı, algoloji, yaŐlı

Abstract

Aim: The pain treatment requirements of the elderly patients are increasing with the rise in the proportion of elderly population. In this article, we aimed to present the clinical features of the patients presenting with pain due to non-cancerous causes over the age of 65 years.

Material and Methods: The data of 642 patients older than 65 years who were admitted to Selçuk University Algology clinic between 01.01.2010 and 31.05.2018 were analyzed. The data were divided into three groups according to age groups: Group I (aged 65-75), Group II (aged 76-85) and Group III (86 years and older).

Results: The median age of the patients was 72 (IQR: 67-78) years, and 62.8% (n=403) of the patients were female. The most common type of pain we observed in patients over 65 years of age who presented to algology clinic with pain was mechanical pain (54.9%). Interventional medication was applied in 39.9% of the patients. When the response to treatment was compared in terms of gender and age groups, no difference was found.

Conclusion: By determining the clinical features in elderly patients who applied to the algology clinic, faster and effective pain relief can be provided.

Keywords: Algology, elderly, pain

Introduction

People with sixty-five years of age and up to age of 65 are accepted as the elderly population, and are divided into three groups: between ages of 65-75 are young elderly, between ages of 76-85 are elderly and 86 years of age and up to age of 86 are advanced elderly ¹. According to the state statistics, the elderly population, which was 4.3% between 1994-2003, increased to 8.7% in 2018. It is estimated that this ratio will increase to 16.3% in 2040 ².

Among the elderly population, the most common health problem causing hospital admission is pain. Many conditions can be a cause of pain, which is classified as cancer pain and non-cancerous pain, in the elderly. Non-cancerous pain is also classified as musculoskeletal pain, vascular origin pain, neurogenic pain, and visceral pain³.

It is known that 80% of the elderly population has at least one chronic disease⁴. The judgment that pain is a condition accompanying aging is common. Also, there are many factors such as hearing, vision, and perception disorders that prevent pain assessment in elderly patients. All these factors cause inadequate the success for the success for the treatment of pain in the elderly. The inadequate treatment causes functional, emotional, cognitive and social problems ⁴. Medical treatment is the first choice in the success for the treatment of pain, no matter what type. In patients who do not respond to medical treatment, pain treatment is performed with interventional methods⁵. In this article, we aimed to present the pain profiles of the patients who admitted to algology clinic with the pain experienced for non-cancer reasons over the age of 65, the treatment methods applied and the responses to treatment.

Materials and Methods

Following the approval of the Ethics Committee, 7522 applications, between 01.01.2010 and 31.05.2018, were investigated in the Algology clinic of Selçuk University Medical Faculty Hospital. One thousand four hundred fifty of these applications belonged to patients 65 years and older. Patients admitted with cancer pain were excluded from the study. Also, recurrent applications were evaluated as a single patient. The files of 642 patients who met all the criteria were evaluated retrospectively. Age, gender, pain type, pain medication type, and interventional medication were evaluated. The pain type was classified as neuropathic, mechanical, ischemic, myofascial and headache. Interventional techniques were classified as trigger point injection, epidural steroid injection, radiofrequency lesions, catheterization, and epidural steroid injection with radiofrequency lesions. Decrease in pain values by more than 50% over three months according to the first evaluation was accepted as the success for the success for the treatment of pain.

The data were divided into three groups according to age groups: Group I (aged 65-75), Group II (aged 76-85) and Group III (86 years and older).

Statistical analysis

Data were statistically analyzed using SPSS Version 22.0 (Statistical Package for the Social Sciences Inc., Chicago, IL, USA). Data were tested for normality with Kolmogorov-Smirnov test. Descriptive statistics were performed in all the patient groups; numerical data were expressed as median (inter-quartile range) while categorical data were given as percentages. Patient features were compared using Chi-Square or Fisher's Exact Test for categorical variables and the

Kruskal-Wallis Test for numerical variables. $p < 0.05$ value was accepted as statistically significant.

Results

During the study period, 7522 patients were admitted to the Algology clinic, and 642 of them were analyzed. The general characteristics of the patients included in the study are presented in **Table 1**.

Table 1. General Characteristics of Patients

Age, year	72 (67-78)
Gender, Male/Female	239 (%37.2) / 403 (%62.8)
Pain Type, n (%)	
Mechanical	343 (%53.4)
Neuropathic	204 (%31.8)
Ischemic	50 (%7.8)
Myofascial	27 (%4.2)
Headache	18 (%2.8)
Pain Medication Type, n (%)	
Non- interventional	386 (%60.1)
Interventional	256 (%39.9)
Interventional Techniques, n (%)	
Trigger point injection	120 (%46.2)
Epidural steroid injection	32 (%12.5)
Radiofrequency lesions	5 (%1.9)
Catheterization	25 (%9.7)
Epidural steroid injection with radiofrequency lesions	75 (%29.2)
Success for the treatment of pain	% 80.1

Values are median (IQR) or n (%).

The median age of the patients was 72 (IQR: 67-78) years, and 62.8% (n=403) of the patients were female. The proportions of pain types were as follows: Mechanical, 53.4% (343); Neuropathic, 31.8% (204); Ischemic, 7.8% (50); Myofascial, 4.2% (27); Headache, 2.8% (18). While 60.1% of the patients

had non-interventional medication, 39.9% had interventional medication. Of the patients treated with interventional medication, 46.2% were administered trigger point injection, 12.5% epidural steroid injection, 1.9% radiofrequency lesions, 9.7% catheterization and 29.2% epidural steroid injection with radiofrequency lesions. Success for the treatment of pain was provided in 80.1% of all patients.

Comparison of the clinical features of patients according to age groups is shown in **Table 2**. There was no significant difference between the age groups in terms of gender, pain type, pain medication type, interventional techniques and success for the treatment of pain (Respectively, $p=0.120$, $p=0.903$, $p=0.485$, $p=0.588$, and $p=0.718$). The most common type of pain in all age groups was mechanical pain (%58.4, %50.3 and %52.4, respectively), while the most common interventional techniques were trigger point injection (%48.9, %41.8 and %42.9, respectively).

Comparison of the clinical features of patients according to gender are shown in **Table 3**. There was no significant difference between the gender groups in terms of age, pain type, pain medication type, interventional techniques and success for the treatment of pain (Respectively, $p=0.158$, $p=0.288$, $p=0.653$, $p=0.150$, and $p=0.342$). The most common pain type in both genders was mechanical pain, while the most common interventional techniques were trigger point injection.

When the response to treatment was compared in terms of gender and age groups, no difference was found.

Table 2. Comparison of the clinical features of patients according to age groups.

Variables	Group I (n=423)	Group II (n=177)	Group III (n=42)	p
Age, year	69 (66-72)	80 (77-82)	87 (86-89)	<0.001
Gender, Male/Female	151 (%35.7) / 272 (%64.3)	76 (%42.9) / 101 (%57.1)	12 (%37.2) / 30 (%62.8)	0.120
Pain Type, n (%)				0.903
Mechanical	232 (%54.8)	89 (%50.3)	22 (%52.4)	
Neuropathic	134 (%31.7)	57 (%32.2)	13 (%31.0)	
Ischemic	32 (%7.6)	15 (%8.5)	3 (%7.1)	
Myofascial	15 (%3.5)	9 (%5.1)	3 (%7.1)	
Headache	10 (%2.4)	7 (%4.0)	1 (%2.4)	
Pain Medication Type, n (%)				0.485
Non- interventional	248 (%58.6)	110 (%62.1)	28 (%66.7)	
Interventional	175 (%41.4)	67 (%37.9)	14 (%33.3)	
Interventional Techniques, n (%)				0.588
Trigger point injection	86 (%48.9)	28 (%41.8)	6 (%42.9)	
Epidural steroid injection	22 (%12.5)	8 (%11.9)	2 (%14.3)	
Radiofrequency lesions	5 (%2.8)	0	0	
Catheterization	18 (%10.2)	5 (%7.5)	2 (%14.3)	
Epidural steroid injection with radiofrequency lesions	45 (%25.6)	26 (%38.8)	4 (%28.6)	
Success for the treatment of pain	% 80.9	% 79.1	% 76.2	0.718

Values are median (IQR) or n (%).

Table 3. Comparison of the clinical features of patients according to gender.

Variables	Male (n=239)	Female (n=403)	p
Age, year	73 (68-77)	71 (67-78)	0.158
Pain Type, n (%)			0.288
Mechanical	117 (%49.0)	226 (%56.1)	
Neuropathic	83 (%34.7)	121 (%30.0)	
Ischemic	18 (%7.5)	32 (%7.9)	
Myofascial	14 (%5.9)	13 (%3.2)	
Headache	7 (%2.9)	11 (%2.7)	
Pain Medication Type, n (%)			0.653
Non- interventional	141 (%59.0)	245 (%60.8)	
Interventional	98 (%41.0)	158 (%39.2)	
Interventional Techniques, n (%)			0.150
Trigger point injection	39 (%39.8)	81 (%50.9)	
Epidural steroid injection	10 (%10.2)	22 (%13.8)	
Radiofrequency lesions	2 (%2.0)	3 (%1.9)	
Catheterization	14 (%14.3)	11 (%6.9)	
Epidural steroid injection with radiofrequency lesions	33 (%33.7)	42 (%26.4)	
Success for the treatment of pain	% 82.0	% 78.9	0.342

Values are median (IQR) or n (%).

Discussion

Various epidemiological studies showed an increase in the incidence of pain with the increase in age^{6,7}. In particular, the incidence of pain is higher in patients aged 65-76 years (defined as younger age group). The frequency of chronic pain in women is higher than in men⁷. As a result of our study, we found that the rate of women is higher in patients presenting with pain complaints similar to the literature.

The prevalence of chronic pain in elderly patients was reported as 58-70%. Musculoskeletal disorders (e.g., osteoarthritis, low back pain) and neuropathic pain are the most common causes of pain in the elderly^{8,9}. The most common type of pain we observed in patients over 65 years of age who presented to algology clinic with pain was mechanical pain (54.9%). This definition includes radicular pain, facet joint and sacroiliac joint degeneration pain and other atalgic pains. In the present study, the second most common pain type is neuropathic pain. This group includes diabetic neuropathy, postherpetic neuralgia, post-thoracotomy pain, trigeminal neuralgia, and various neuralgias. Pain caused by circulatory disorders in the extremities or obstruction in peripheral vessels was included in the ischemic pain group. The rate of patients with ischemic pain was 4.2% in the present study. Myofascial pain syndrome is a condition that manifests itself in sensitive regions called the trigger point in one or more muscles and/or connective tissue. Pain, movement limitation, weakness and rarely autonomic dysfunctions may occur due to these sensitive points. As a result of our study, the rate of patients with myofascial pain syndrome was found to be 7.8%. The percentage of patients presenting with headache was 2.8%. As a result of various studies, the incidence of headache in the elderly was found to be between 3.9% and 4.4%^{10,11}. The low rate in our study can be attributed to

the fact that these patients are mostly referred to neurology clinics.

The most common pain management in the elderly is the use of oral or injectable analgesic drugs¹¹. Many points should be considered in elderly patients during analgesic medication use. A large number of drugs that use chronic diseases present in elderly patients may interfere with analgesics. As an analgesic, the drug with the least side effect profile should be selected. And it should be noted that the metabolism, absorption, elimination and dispersion volumes of drugs change with aging¹⁰.

The first-choice drugs for pain, especially for mild to moderate pain, are nonsteroidal anti-inflammatory drugs (NSAIDs) and paracetamol. The gastrointestinal, renal and cardiac side effects of these drugs increase with aging.

In the treatment of severe pain in elderly patients, the combination of nonopioid and opioids is recommended¹². It is known that the pharmacodynamic sensitivity of opioid analgesics is increased in elderly patients¹³. There is an increase in the side effects of opioids with aging. And also, there is a decrease in renal clearances of opioids with aging. A higher maximal plasma concentration is observed in opioid use compared to young people.

Considering the problems of analgesic drugs in elderly people, it is reported that early invasive treatment in elderly patients will be beneficial in many studies^{14,15}. There is no definitive algorithm for invasive pain management in elderly patients. In our clinic, we prefer to apply early invasive pain treatment to patients in whom medical treatment is insufficient. Trigger point injection is the most common invasive treatments (46,2%) and the second most common invasive treatment is radiofrequency lesions (31.1%). Radiofrequency lesion is an effective and easily applied method based on the principle of creating peripheral or central nerve tissue damage. With the

help of a special generator and special electrodes, heat is supplied to the desired nerve and damage is caused.

Firstly, the diagnostic block is applied to the patients to be treated so that it is tried to have an idea about the effectiveness of the treatment¹⁵. We applied a diagnostic nerve block to all patients who had planned radiofrequency lesions in our clinic. Patients who had more than a 50% reduction in pain after the block were included in the radiofrequency lesions application. We applied radiofrequency lesions in patients with cervical and lumbar facet joint pain, sacroiliac joint pain, trigeminal neuralgia and sympathetic pain in the lower extremity.

It is recommended that epidural steroid should be applied to patients presenting with waist or neck pain as a component of radiculopathy, secondary to lumbar or cervical disc pathology or spinal stenosis¹⁶. Epidural steroid applications can be performed by interlaminar, transforaminal and caudal techniques. In our clinic, epidural steroid application is preferred with transforaminal technique. In patients with radicular pain, transforaminal steroids were applied, and radiofrequency lesions were applied to patients with pain due to facet joint or sacroiliac joint degeneration.

In the treatment of myofascial pain, dry needle applications or saline, steroid or local anesthetic injections are performed on the trigger points¹⁵. We use local anesthetics lidocaine for trigger point injection.

As a result of our study, 80.1% of the treated patients had a decrease in pain values by more than 50% over three months according to the first evaluation.

Conclusion

The most common pain type in elderly patients who applied to the algology clinic is mechanical pain. Medical treatment is the most common treatment modality. However, invasive therapies were applied when medical treatment could not be applied or inadequate. With the help of invasive treatments, the pain of the patients was decreased. Due to the accompanying diseases in elderly patients, the methods used do not always yield good results and may be insufficient. However, early application of these methods is noteworthy for reducing the need for analgesics and avoiding side effects.

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Conflict of Interest

None.

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