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ÖNSÖZ

Tıp eğitimi öğrencilikle başlayan ve yaşam boyu devam eden bir sanattır. Bu sanat sürekli günceli takip etmeyi gerektirir. Dergimiz tıp kariyerine henüz başlayan asistanlarımız da dâhil olmak üzere cerrahi tıp bilimine gönül veren bütün hekim meslektaşlarımızın ilham verici çalışmalarını kapsasın istiyoruz

Gelişen teknoloji, bilimsel gerçeklerin yarılanma ömründeki hız, muazzam bilgi dağarcığı ve bilgiye ulaşım hızı ile yeni bir değişim içinde bulmaktayız kendimizi. Bu değişim kaçınılmaz ve bazı durumlarda da hiç istenmeyen hallere de bürünebilir. Bu yüzdendir ki bilgiye ulaşmanın bu kadar hızlı olduğu bu çağda bu ulaşım hızından daha önemli olan doğru bilgiye ulaşabilmektir. Tüm bu değişimlerin ortaya koyduğu umut vadeden çalışmaların ve gelişmelerin doğru ve gerçekçi kaynaklardan takip edilebilmesi ilkesiyle ve tıp eğitimine faydası olması umuduyla ‘’Atatürk Üniversitesi Cerrahi Tıp Bilimleri Dergisi (Atatürk University Faculty of Medicine Journal of Surgical Medical Science)’ nin ilk sayısını değerli meslektaşlarımızla paylaşmanın mutluluk ve gururu içindeyiz.

Dergimiz bu ilk sayısıyla yılda 3 kez düzenli olarak basılarak https://bilimseldergiler.atauni.edu.tr/system/ctbd/issue/current adresinden çevrimiçi olarak erişime açık olacaktır.

Atatürk Üniversitesi Tıp Fakültesi Dekanı Prof. Dr. Fatih Albayrak’a, derginin editör kuruluna, dergimizin ilk sayısına ilgi gösterip makalelerini gönderen değerli bilim insanı hekim arkadaşlarıma, hakemlik yapan değerli meslektaşlarıma çok teşekkür ederim.

Dergimizin kuruluş aşamasında desteğini hep yanımızda hissettiğimiz, bilimsel dergiler koordinatörü Prof. Dr. Sinan Aktaş’a ve ekibine şükranlarımı sunarım.

Ve son olarak; bu derginin hazırlanmasında ki her aşamada hep birlikte olduğum Doç. Dr. Erkan Cem Çelik ve Doç. Dr Ali Ahıskalıoğlu’na çok teşekkür ederim

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İÇİNDEKİLER

ONE OF THE COMPLICATIONS OF SPINAL ANESTHESIA: POSTSPINAL BACK-ACHE AND PREEMPTIVE USAGE OF THE TOPICAL DICLOFENAC

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Abstract

Objectives: Pre-emptive analgesic drugs have an important role in the diminish of post-operative pain and some interventions' pain. Present study was to examine the effect of the topical application of diclofenac diethylammonium on the prevention of backache after spinal anaesthesia. **Methods:** This randomized, controlled clinical study consisted of 210 knee arthroscopy patients aged 18–70 years who were scheduled to undergo elective surgery. The patients were randomly assigned to a diclofenac diethylammonium group (Group D) or a placebo group (Group P). Before administration of spinal anaesthesia, diclofenac diethylammonium gel for Group D, plasebo gel for Group P was rubbed onto the skin in the lumbar region where the spinal anaesthetic was to be applied. When the Bromage motor scale (BMS) was 3, an adductor canal catheter was inserted. Using the Visual Analog Scale (VAS), the patients were asked about pain in the area where the spinal anaesthetic had been administered. VAS values were recorded 1, 2, 4, 8, 16 and 24 h after the surgery. **Results:** There wasn't statistically difference between the groups' demographic datas, some datas about spinal anesthesia, duration of the operation and ratios of perioperative analgesia. But there was a statistically differences between the groups' postoperative analgesia. When the groups' 1, 2, 4, 8, 16 and 24-h VAS values and VAS values one week and six months after the surgery were evaluated, there was a statistically significant difference between the two groups in rest and dynamic. **Conclusion:** The use of topical diclofenac after spinal anaesthesia can significantly reduce the incidence of backache.

Keywords: Analgesia, Anesthesia, Spinal, Backache, NSAIDs, Nerve block

Özet

Giriş: Pre-emptive analjezik ilaçlar post-operatif ve anestetik müdahale ağrısının yönetiminde önemlidir. Bu çalışmada, diklofenak dietilamonyumun spinal anesteziden sonra sırt ağrısının önlenmesinde topik uygulanmasının etkisini araştırmak amaçlandı. **Metod:** Bu randomize kontrollü klinik çalışma, elektif cerrahi girişim planlanan 18-70 yaş arasındaki 210 diz artroskopi hastasından oluşmaktadır. Hastalar rasgele seçilerek bir kısmı diklofenak dietilamonyum grubuna (Grup D) bir kısmı plasebo grubu (Grup P) olarak tayin edildi. Spinal anestezi uygulanmadan önce, Grup D için topikal diklofenak dietilamonyum jel, Grup P için topikal placebo jel, spinal anestezik uygulanacak lumbar bölgede cilt üzerine sürüldü. Bromage motor skalası (BMS) 3 olduğunda, tüm hastalara addüktor kanal kateteri takıldı. Visual Analog Skala (VAS) kullanılarak hastalara spinal anestezi uygulanan alanda bulunan ağrı sorgulandı. 1, 2, 4, 8, 16 and 24. saatlerde cerrahi sonrası hastaların VAS skorları not edildi. **Bulgular:** Grupların demografik verileri, spinal anestezi ile ilgili bazı veriler, operasyon süresi ve perioperatif analjezi oranları arasında istatistiksel olarak fark yoktu. Ancak, grupların postoperatif analjezi kullanımları arasında istatistiksel olarak anlamlı farklılık vardı. Operasyondan sonra 1, 2, 4, 8, 16 ve 24 saatlerde, bir hafta ve altı ay sonra tüm grupların VAS değerlerine bakıldığında, istirahat ve hareket halinde Grup D'nin VAS değerlerinin daha düşük olduğu görülmüştür ve her iki grup arasında istatistiksel olarak anlamlı fark vardır. **Sonuç:** Spinal anesteziden sonra topikal diklofenak kullanılması sırt ağrısı sıklığını azaltabilir.

Anahtar kelimeler: Preemptif analjezi, Topikal analjezi, post spinal baş ağrısı, Nonsteroid inflamatuar ilaçlar.

1. INTRODUCTION

Among anaesthesia practices, regional anaesthesia, such as epidural, spinal and spinal-epidural (combined), is usually preferred over general anaesthesia. A number of factors explain this preference. With regional anaesthesia, the patient is conscious, and pulmonary functions are maintained. In addition, regional anaesthesia does not require intubation, it reduces operational bleeding and thromboembolic complications, and it is more cost effective then general anaesthesia(1).

After regional anaesthesia, a patient usually starts to feel pain in the surgical area after the effects of analgesic drugs have worn off. Although the pain that develops in the surgical area is usually primary, patients may also experience secondary pain in the regional anesthesia intervention area. Various studies have highlighted the role of backache following post-spinal anaesthesia as a cause of patient discomfort after surgery(2-5). Several studies shows that postspinal backache incidance in early period of the surgery varies from 4,95% to 29% (6, 7). According to one study, the incidence of backache after spinal anaesthesia was 2.3% (6). In another study, post-spinal backache was reported by 29.3% of patients on one day after spinal anaesthesia (1). In a study, evaluate 3 months period after surgery, showed that postspinal backache incidance was found 12,3% at the end of the 3th months (5).

Pre-emptive analgesic drugs, which are administered to reduce the need for analgesic agents during the post-operative period, are important in the management of post-operative pain and the prevention of the stress response caused by surgery (3).Analgesia administered prior to surgery can prevent hyperalgesia by inhibiting cyclooxygenase (COX) enzyme activity, thereby reducing the production of prostaglandin, which increases in response to surgery-related tissue damage. It can also reduce inflammation and the sensation of pain. The inhibition of COX enzyme activity and prostaglandin synthesis has anti-inflammatory and analgesic effects (8). The use of topical analgesic drugs has various advantages. For example, the effects of the drug are targeted to a specific area. As a result, the effects on the entire body are minimized (9). A previous study showed that topical drugs reduced post-spinal related pain in cutaneous interventions (10).

The aim of the present study was to examine the effect of the topical application of diclofenac diethylammonium as a non-steroidal inflammatory drug (NSAID) on the prevention of backache after spinal anaesthesia.

2. METHODS

This randomized, controlled clinical trial was conducted in the anaesthesia clinic operating room service department of a state hospital located in eastern of Turkey. The local ethics committee approved the study. The study consisted of 106 knee arthroscopy patients aged 18–70 years who underwent spinal anaesthesia during a pre-surgery examination prior to elective surgery. All the patients had normal physical examination and laboratory results and were status I-II, according to the American Society of Anesthesiologists (ASA). Patients who had prostaglandin inhibitor sensitivity and bleeding problems and were in ASA III-IV group, as well as pregnant women and breastfeeding mothers, and take an analgesic treatment were excluded from the study. On the day before the surgery, the patients were informed in detail about the planned procedure, and written consent was obtained.

Thirty minutes before the surgery, 53 patients were selected by the sealed envelope method. In this group (Group D), diclofenac diethylammonium (Dikloron®, Deva Holding, İstanbul) gel was applied in the amount recommended by the manufacturer (4 g per 400 cm^2 area, 46.4 mg). The gel was rubbed onto the skin in the lumbar region where the spinal anaesthesia was to be applied. The other 53 patients served as the placebo group (Group P). The colour and texture of the gel applied in Group P were similar to the colour and texture of that applied in Group D.

At the time of the surgery, each patient was placed in a supine position on the operating table. In all the patients, vascular access was established through a vein. Using an 18-gauge (G) cannula, a 0.9% NACl infusion was initiated at a rate of 5–8 ml/kg/h. The region where the spinal anaesthesia injection was to be applied was sterilized with povidone iodine. Sterile sheets were placed around the site, and the spinal anaesthesia was administered using a 27-G spinal needle. After cerebrospinal fluid was observed, a 2–2.5 ml dose of bupivacaine hydrochloride and dextrose monophosphate (Marcain Spinal Heavy®, AstraZeneca, İstanbul) was administered. Spinal drug doses were administered taking into account the physical features of the patients such as age, weight, height etc. When the Bromage motor scale (BMS) was 3, and heat desensitization was observed, an adductor canal catheter was inserted into the patient via ultrasound guidance. The surgical incision was then made. The following parameters were recorded: the patient's age, weight, and height, sites of spinal anesthesia, prior history of spinal anaesthesia, number of spinal anesthesia interventions in the current surgery, presence of perioperative analgesia, presence of post-operative analgesia, and duration of the surgery.

After the surgery, the patients were moved to the recovery room. Patients displaying no haemodynamic problems and having sensory block at the level of the 10th thoracic dermatome or lower were transferred to the relevant services. A positive pinprick test was used to determine the cessation of the effect of spinal anaesthesia after the surgery, as well as the presence of heat sensitization and a BMS value of 0. Then, as is routine practice in our clinic, 10 ml of 0.5% bupivacaine (Marcaine®) were administered as post-operative analgesia.

After the pain surrounding the surgical area had receded to a tolerable level with 10 ml of 0.5% bupivacaine via adductor canal catheter, the Visual Analog Scale (VAS) was used to assess the pain in the area of the spinal anaesthesia intervention. The patients were asked to score the pain from 0 (minimum) to 10 (maximum), and these values were recorded. The number of patients with a score of 4 or higher on the VAS was recorded. In case of VAS>4, 10 mg/kg Paracetamol infusion was applied to patients Starting from the moment that the BMS value was the 0, VAS values were recorded 1, 2, 4, 8, 16 and 24 h after the surgery. Post-surgery VAS values were also recorded one week and six months later. The one-week VAS evaluations were performed in the orthopaedics outpatient clinic, and the six-month VAS evaluations were determined via a telephone call

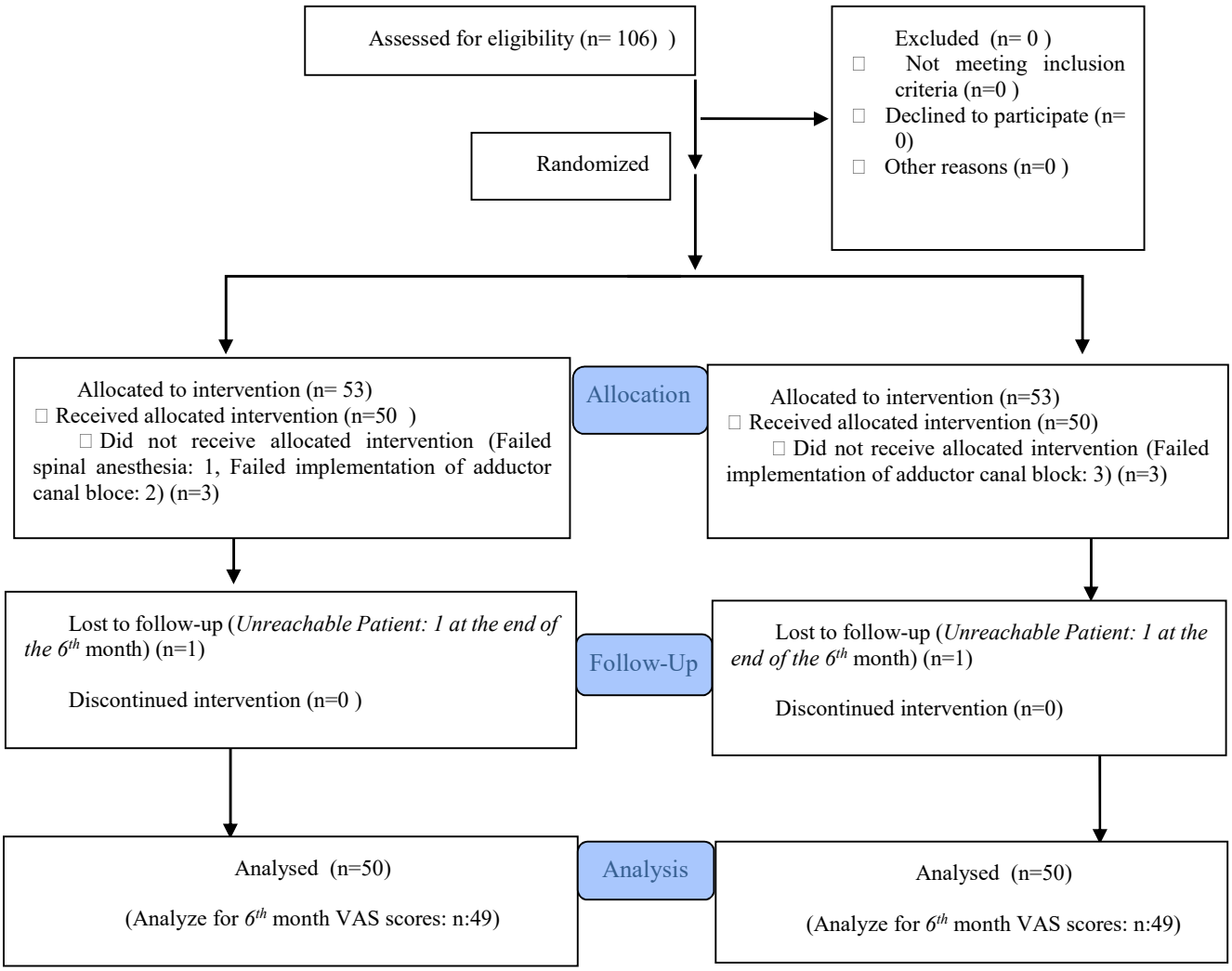
2.1 Sample Size

In the power analysis performed with VAS assessment with dynamic at the sixth months, it was determined that the power was 0.91 in the 95% confidence interval with 0.05 α error by G Power power analyzer calculator. This result indicates that the study sample is sufficient.

2.2 Statistical Analysis

The SPSS (Statistical Package for Social Sciences) (Chicago, USA) for Windows 20.0 program was used for the evaluation of all the data. Categorical data between the two groups were compared using Pearson' chi-square test and expressed as counts (percentages). The Kolmogorov–Smirnov test was used to evaluate the data distribution. The Mann–Whitney *U* test was applied for non-normally distributed continuous variables. Continuous variables were expressed as the mean and standard

Figure 1: Progress diagram of the study showing all groups



deviation (SD), depending on the normality distribution of the data. A *p* value of less than 0.05 was considered statistically significant.

3. RESULTS

In total, 106 patients were included in the study: 53 in Group D and 53 in Group P. In Group D, one patient was excluded from the study because no spinal anaesthesia was applied, and another two patients were excluded from the study because of failed implementation of the adductor canal block. In Group P, three patients were excluded from the study because of failed implementation of the adductor canal block. One patient in Group D and another in Group P could not be contacted by telephone at the time of the six-month evaluation. Thus, their six-month VAS values were not included in the study (Figure 1).

Table 1: Demographic datas, some datas about intervention, duration of the operation and ratios of peroperative and postoperative analgesia of Group D and Group P

	Group D (n:50)	Group P (n:50)	p value
Age (Years)	46.68 ± 8.81	47.56 ± 8,78	0.629 α
Weight (kg)	65.40± 10,27	66.24 ± 9.77	0.777 α
Height (cm)	172.34 ± 7.13	171.00 ± 5.62	0.847 α
Gender (M/F)	28/22	26/24	0.688 α
Spinal Anesthesia History (0/1/2/3)	28/16/5/1	15/13/5/2	0.763 β
Intervention Area (L5-S1/L4-L5/L3-L4/ 2 levels)	21/25/3/1	26/21/2/1	0.782 β
Count of Intervention (1/2/3/4/5)	34/13/1/1/1	29/17/3/0/1	0.570 β
Bone Contact (Y/N)	10/40	13/37	0.476 β
Duration of the Operation (1/2 hour)	46/4	43/7	0.338 β
Peroperative Analgesia (Y/N)	8/42	6/44	0.564 β
Postoperative Analgesia (Y/N)	12/38	15/35	0.499 β

Values are expressed mean ± standart deviation or number. kg; kilogram, cm; centimeter, M; male, F; female. L: Lumbar, S: Sacral

α p>0,05 Student's T test between groups

β p>0,05 Chi-square test between groups.

Table 2: The Comparison of VAS values in rest between group D and Group P

VAS	Group D (n:50)	Group P (n:50)	p value
VAS 1st hours	3.18 ± 0.71	3.52 ± 0.73	0.021 α
VAS 2nd hours	3.24 ± 0.68	3.56 ± 0.70	0.024 α
VAS 4th hours	3.02 ± 0.71	3.30 ± 0.61	0.038 α
VAS 8th hours	2.66 ± 0.65	2.98 ± 0.76	0.028 α
VAS 16th hours	2.42 ± 0.60	2.70 ± 0.76	0.045 α
VAS 24th hours	1.92 ± 0.69	2.26 ± 0.66	0.014 α
VAS 1st Week	1.64 ± 0.52	1.90 ± 0.46	0.010 α
VAS 6th Month	1.12± 0.43	1.34 ± 0.59	0.037 α

Values are expressed mean ± standart deviation or number.

α p<0,05 Student's T test between groups

Table 3: The Comparison of VAS values with dynamic between group D and Group P

VAS (mean±SD)	Group D (n:50)	Group P (n:50)	p value
VAS 1st hours	5.04 ± 0.75	5.38 ± 0.75	0.026 α
VAS 2nd hours	5.12 ± 0.62	5.40 ± 0.69	0.038 α
VAS 4th hours	4.84 ± 0.73	5.16 ± 0.81	0.043 α
VAS 8th hours	4.50 ± 0.67	4.82 ± 0.84	0.040 α
VAS 16th hours	4.24 ± 0.62	4.56 ± 0.81	0.030 α
VAS 24th hours	3.72 ± 0.72	4.06 ± 0.89	0.039 α
VAS 1st Week	1.90 ± 0.64	2.70 ± 0.95	0.000 α
VAS 6th Month	1.26± 0.63	1.78 ± 1.03	0.003 α

Values are expressed mean ± standart deviation or number.

α p<0,05 Student's T test between groups

Table 4: Number of patients who score 4 or more on the VAS scale

	Group D		Group P	
VAS (%)	**P**	**A**	**P**	**A**
VAS 1st hours	17	48	22	49
VAS 2nd hours	18	48	29	49
VAS 4th hours	10	48	34	49
VAS 8th hours	4	47	18	48
VAS 16th hours	2	47	3	46
VAS 24th hours	2	30	2	38
VAS 1st Week	0	1	0	28
VAS 6th Month	0	1	0	10

Values are expressed as a number P; passive, A; Active

No statistical differences were found between the groups' age ratios, average ages, weights, and heights. There were also no statistical differences in the patients' prior histories of spinal anaesthesia, sites of spinal anaesthesia, numbers of spinal anaesthesia injections, vertebral contact and durations of the operations (Table 1). In addition, there was no statistical differences between groups in perioperative analgesia, whereas there was a significant between-group difference in the use of post-operative analgesia (Tables 2 and 3).

When the post-surgery VAS values (1, 2, 4, 8, 16 and 24 h and one week and six month) of the groups were evaluated, there was a statistically significant difference in rest and dynamic between the two groups (Table 4).

4. DISCUSSION

At the end of the study; In patients, who were rubbed onto diclofenac diethylammonium on spinal anesthesia intervention area, had a low postspinal backache incidence at the end of the 6th months compared with patients weren't applied diclofenac diethylammonium.

Topical NSAIDs are used for pain-related complaints and anti-inflammatory purposes, such as soft tissue damage, minor arthritis injuries and burns (11). Many enteral and parenteral analgesic and anti-inflammatory systemic drugs are available to treat post-surgery related pain (12). However, the use of topical analgesic and anti-inflammatory drugs has been found to be an appropriate treatment for minimizing systemic side effects. As systemic effects were expected to be relatively uncommon in the present study, topical administration was selected as pre-emptive analgesia to prevent backache following spinal anaesthesia. The topical NSAID significantly reduced backache associated with post-spinal anaesthesia.

Various types and sizes of spinal needles are used in lumbar puncture (LP) procedures involving children in paediatric oncology clinics (4). Backache was observed in 6 (11%) of 56 patients after LP using a 22-G Quincke spinal needle, whereas no backache was observed in 43 of 56 patients after LP using a 25-pencil-point spinal needle (4). In the present study, the incidence of backache without topical medication before the intervention was 0% in the rest and %10 dynamic at the end of the six mounths, which was similar to that found in other studies (2, 13).

Apart from NSAIDs, various topical locally applied anaesthetic agents can be used for pre-emptive analgesia. These include creams containing lidocaine and prilocaine, both of which have been tested and found to be successful as pre-emptive analgesia (14-16). Although studies have examined the use of topical NSAIDs as pre-emptive analgesia in eye surgery and surgery involving a laryngeal mask (17, 18), there are no studies in the literature on the use of topical NSAIDs used for spinal backache. In a study in which topical lidocaine- and prilocaine-containing creams and penil block were used for pre-emptive analgesia in circumcision operation, a local anaesthesia mixture was applied to the patients 1 h before the operation, and penile block was compared (19). Although the analgesic effects of the creams were similar during the surgery, the analgesic effect of penile block was better during the post-operative period (19). In another study, post-operative pain was assessed in patients who underwent laparoscopic cholecystectomy and received a topical local anaesthetic before and after insertion of a trocar (20). As compared with a placebo group, the patients who received the topical local anaesthetic reported less pain (20). Another study examined the effect of a local anaesthetic mixture on the prevention of pain associated with injections into the tails of rats (21). Observations of behavioural disturbances and aggressive behaviours after the injections provided indirect evidence that the effect of the pre-emptive analgesia was insufficient (21). A study of the analgesic effect of topical tramadol during invasive third molar dental surgery showed that locally administered tramadol, combined with oral ketorolac, had an effective analgesic effect after the surgery (22). General anaesthetics and local tramadol exhibit only analgesic effects. In contrast, NSAIDs have both analgesic and anti-inflammatory effects, allowing them to effectively prevent inflammation and pain after surgery.

In common with other studies, in the present study, the topical drug was administered at least 30 min before the invasive intervention (15, 16, 19, 23). This provided enough time for the drug to produce the maximum analgesic effect. The BMS and pinprick test were used to determine when the effect of the spinal anaesthesia had worn off after the surgery, and the VAS was used to determine whether the diclofenac diethylammonium-containing drug reduced pain surrounding the surgical area to a tolerable level after the adductor canal block. The effect of the diclofenac diethylammonium-containing gel was statistically significant in comparison to that of the placebo gel. As shown by the VAS values in the hours, weeks and six months after the surgery, the NSAID significantly reduced pain levels in Group D in comparison to those in Group P. The use of the NSAIDs for pre-emptive analgesia significantly reduced backache resulting from the spinal anaesthesia.

In a previous study, throat ache after surgery involving the use of a laryngeal mask was decreased in a group treated with topical benzydamine hydrochloride as compared to a placebo group (23). The degree of severity of backache following post-spinal anaesthesia varies. The use of a topical drug is associated with relatively few side effects and can therefore prevent morbidity associated with post-spinal anaesthesia. It seems that the use of topical drugs in the other methods technically similar to spinal anaesthesia, such as LP, can be a proper option.

The analgesia guidelines recommend the NSAIDs as the first line treatment for preemptive analgesia in order to reduce the potential incidence of any adverse reactions due to the administration of subsequent lines of treatment (24). The use of topical NSAIDs in this study further reduced the possibility of these potential adverse reactions. Furthermore, topical medicine use facilitated the monitorization of the patients by the healthcare personnel due to their simple mode of administration and follow-up. Therefore, topical anesthetics and NSAIDs have been used for many years for superficial tissue traumas and interventions (25).

The study had some limitations. In some of the patients who were interviewed, there might be some other underlying conditions leading to pain in the skin in addition to the spinal anesthesia interventions or to the interventions performed in the past. These underlying conditions might have been overlooked by the patients, raising a possibility to affect the results of the study. Another limitation could be that the study participants were evaluated at the orthopedia and traumatologia clinic end of the 1st week and on the phone at the 6. months after without investigators' observations. In addition, the results of the pain assessment might vary among the individuals and therefore it is a possibility that misleading results might be obtained. Although the assessments are possible using the VAS results reported by the patients themselves, the VAS values still remain to be just a subjective method for assessment.

The use of topical diclofenac significantly reduced the incidence of backache, which is a common occurrence after spinal anaesthesia. NSAIDs have both analgesic and anti-inflammatory effects. Therefore, they can effectively prevent inflammation and pain after surgery. Prior to the administration of spinal anaesthesia, we recommend the administration of topical diclofenac in situations other than emergency surgery, where there is insufficient time for the analgesic agent to take effect.

Conflict of Interest: The authors declare that no conflict of interest.

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OUR CLINICAL EXPERIENCE IN THE PALLIATIVE CARE CENTER OF A TRAINING AND RESEARCH HOSPITAL IN EASTERN TURKEY BETWEEN 2018 AND 2019: A RETROSPECTIVE STUDY

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Abstract

Objective: As a result of the advancements in the field of medicine, there has been a positive increase in the life span and quality of life of human beings, so people increasingly need quality care. This study aimed to retrospectively evaluate the working principle of the palliative care unit in a training and research hospital and the patients hospitalized in the palliative care unit between 2018-2019. **Methods:** After obtaining approval from the local ethics committee, patients who were hospitalized in the palliative care center of a training and research hospital in eastern Turkey between the 1 January 2018 and 31 December 2019 were included in the study by retrospective file scanning. Patients demographic datas, complaints, underlying diseases and discharge statuses were recorded and evaulated. **Results:** Of the patients hospitalized, 21.41% were admitted to our palliative care for respiratory distress, 19.31% for pain palliation, 19.36% for nutritional support, 13.81% for decubitus ulcer, and 26.11% were admitted for different complaints. Of these patients, 17.4% had cerebrovascular accident, 12.7% had Alzheimer's disease, 11% had diabetes mellitus, and its complications, 6.8% had stomach cancer, 4% lung cancer, 3.8% had pain, and the remaining 44.3% had various underlying diseases such as infectious diseases, other malignancies, post-traumatic rehabilitation and care, tetraplegia/paraplegia, different chronic diseases, etc. The discharge statuses of the patients were as follows: 22.72% passed away, 31.25% were referred to a different department, 39.58% were discharged to their home or care center, and 6.45% were still hospitalized from the beginning of 2020. **Conclusion:** Expert teams and centers are needed for the treatment, care, and rehabilitation of patients who need end-of-life and palliative care. We believe that more palliative care centers will be needed with the increase in the rates of malignant and chronic diseases in addition to the increase in the number of people requiring care.

Keywords; Palliative care, elderly population, need of care

ÖZET

Giriş: Tıbbi alanda gerçekleşen gelişmeler sonucu insanoğlunun ömür süresi ve yaşam kalitesinde olumlu yönde artışlar olmuş, bu yüzden insanların bakım ihtiyaçları giderek artmıştır. Bu çalışmada bir eğitim ve araştırma hastanesinde palyatif bakım ünitesinin çalışma usulü ve 2018-2019 yılları içerisinde palyatif bakım ünitesinde yatan hastaların retrospektif olarak değerlendirilmesi amaçlanmıştır. **Metod:** Yerel etik kurulundan alınan onay sonrası Türkiye'nin doğusunda bulunan bir eğitim ve araştırma hastanesinde geçmişe yönelik dosya taraması yolu ile 1 Ocak 2018-31 Aralık 2019 tarihleri arasında palyatif bakım merkezinde yatan hastalar çalışmaya dahil edildi. Hastaların demografik verileri, şikayetleri, altta yatan hastalıkları ve tedavinin sonunda sahip oıldukları durum kaydedildi ve değerlendirildi. **Bulgular:** Yatan hastaların %21,41'i solunum sıkıntısı, %19,31'u ağrı palyasyonu, %19,36' u beslenme desteği, %13,81'ü dekübit ülseri ve %26,11'i ise farklı şikayetlerle palyatif bakım servisimize başvuru yapmışlardır. Bu hastaların %17,4'u serebrovasküler olay, %12,7'si alzheimer, %11'i diabetes mellitus ve komplikasyonları, %6,8'i mide kanseri, %4'ü akciğer kanseri, %3,8'i ağrı ve kalan %44,3'ü enfeksiyon hastalıkları, diğer maligniteler,travma sonrası rehabilitasyon ve bakım, tetrapleji/parapleji, farklı kronik hastalıklar vb gibi altta yatan farkı hastalıkları mevcuttu. Hastaların eksterne oluş halleri %22,72'si eksitus, %31,25'i farklı bir sevise devir, % 39,58'u evine veya bakım merkezine taburcu, %6,45'i ise 2020 yılı başı itibari ile yatışı devam ediyor gözükmekte idi. **Sonuç:** Son dönem ve bakım ihtiyacı bulunan hastaların tedavi, bakım ve rehabilitasyonları için uzman ekip ve merkezlere ihtiyaç duyulmaktadır. Bakım ihtiyacı olan insan sayısının artışının yanı sıra malignite ve kronik hastalık oranlarında yaşanan artış ile birlikte daha çok palyatif bakım merkezine ihtiyaç duyulacağını düşünmekteyiz.

Anahtar kelimeler; Palyatif bakım, yaşlı nüfus, bakım ihtiyacı

1. INTRODUCTION

As a result of the developments in the field of medicine, especially since the second half of the 20th century, there has been a positive increase in the life span and quality of life of human beings. Intensive care units have been needed more and more over time due to the prolonged life span and the need for quality care. Rapid progress has been observed in the palliative care process in countries such as Scandinavian countries, the UK, and Canada since the beginning of the 1990s (1). The studies started in 2008 in our country accelerated especially in the 2010s (2). According to the data from the Turkey Statistical Institute, the rate of population aged 65 years and over is increased to 8.74% as of 2018, and this result showed that the population in need of care has gradually increased (3). Moreover, with this result, prolonged hospitalizations occurred day by day in current intensive care units, and both material and moral losses have occurred with the broad hospitalization indications. (4)

The World Health Organization (WHO) defined palliative care as an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening diseases, through the prevention and relief of pain and other problems utilizing physical, psychosocial, and spiritual treatment. This definition also involves attempts to predict potential adverse events before they occur and to implement measures. (5,6) In 1967, Cicely Saunders proposed the idea of “hospice” for people who needed medical and social care and who were in their terminal period, and with the spread of this idea, palliative care units have started to be opened in hospitals worldwide. The first article of the directive on the implementation of procedures and principles of palliative care services issued by the Ministry of Health of the Republic of Turkey in 2014 defined palliative care as "early identification and assessment of pain and other symptoms in patients encountering problems associated with life-threatening diseases, and to relieve or prevent their pain by providing medical, psychological, social, and spiritual support to these patients and their families to improve their quality of life", which paved the way to accelerate palliative care services and to assess these services within the scope of insurance in Turkey. (7)

This study also aimed to retrospectively evaluate the working principle of the palliative care unit in a training and research hospital in eastern Turkey, which served as a center for the region, and the patients hospitalized in the palliative care unit between 2018-2019.

2. METHODS

After obtaining approval from the local ethics committee, patients hospitalized in the palliative care center of a training and research hospital in eastern Turkey between 1 January 2018-31 December 2019 were included in the study by retrospective file scanning. The demographic data, length of hospital stay, admission complaints, underlying chronic diseases and treatment outcomes of the patients were analyzed through the electronic information management system of the hospital and archive data. Patients with incomplete file information and repeated hospitalizations with the same symptoms and complaints were excluded from the study.

3. RESULTS

This study included a total of 528 adult patients. Of these patients, 50.6% were female, and 49.4% were male. The mean age of female patients was 75.71±12.681 years, the mean age of male patients was 72.06±15.47 years, while age of all patients were 73, 91 ± 14,29 years. The length of hospital stay was 28.51±33.91 days in the female patients, 37.63±64.81 days in the male patients and 32, 84 ± 51,59 days in all patients. Of a total of 528 patients hospitalized, a total of 2 patients were from abroad; one of them was Syrian, and the other one was Madagascarian (Table 1).

Table 1: Evaluation of demographic data of patients.

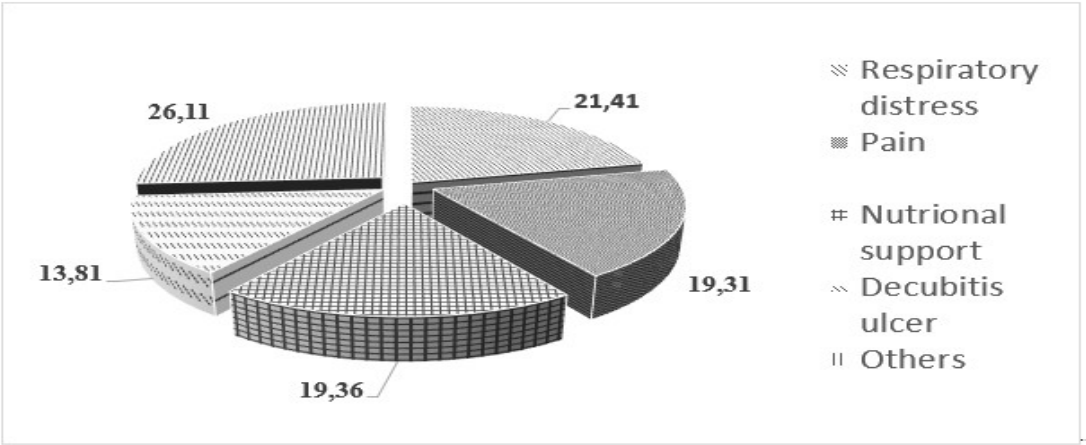
Age	73, 91 ± 14,29 [18-100]
Gender (Female/Male)	267 (%50.6) / 261 (%49,4)
Duration of hospitalization days	32, 84 ± 51,59 [1-794]
Nationality (Turkey/Syria/Madagascar)	526/1/1

Values were expressed mean±standart deviation or number.

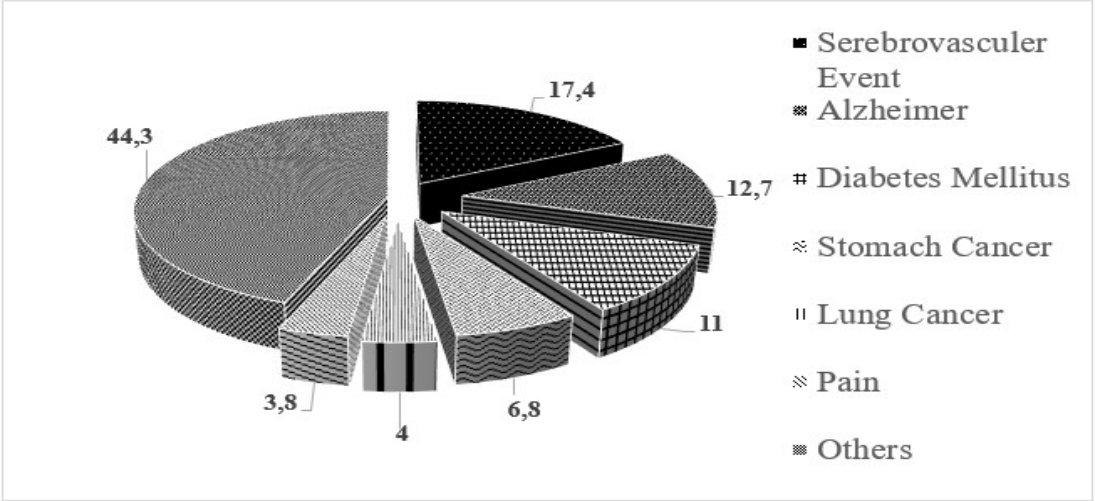
Of the patients hospitalized, 21.41% were admitted to our palliative care for respiratory distress, 19.36% for pain palliation, 19.31% for nutritional support, 13.81% for decubitus ulcer, and 26.11% were admitted for different complaints. Of these patients, 17.4% had cerebrovascular accident, 12.7% had Alzheimer's disease, 11% had diabetes mellitus, and its complications, 6.8% had stomach cancer, 4% lung cancer, 3.8% had pain, and the remaining 44.3% had various underlying diseases such as infectious diseases, other malignancies, post-traumatic rehabilitation and care, tetraplegia/paraplegia, different chronic diseases, etc (Graphic 1-2).

The discharge statuses of the patients were as follows: 22.72% passed away, 31.25% were referred to a different department, 39.58% were discharged to their home or care center, and 6.45% were still hospitalized from the beginning of 2020 (Graphic 3).

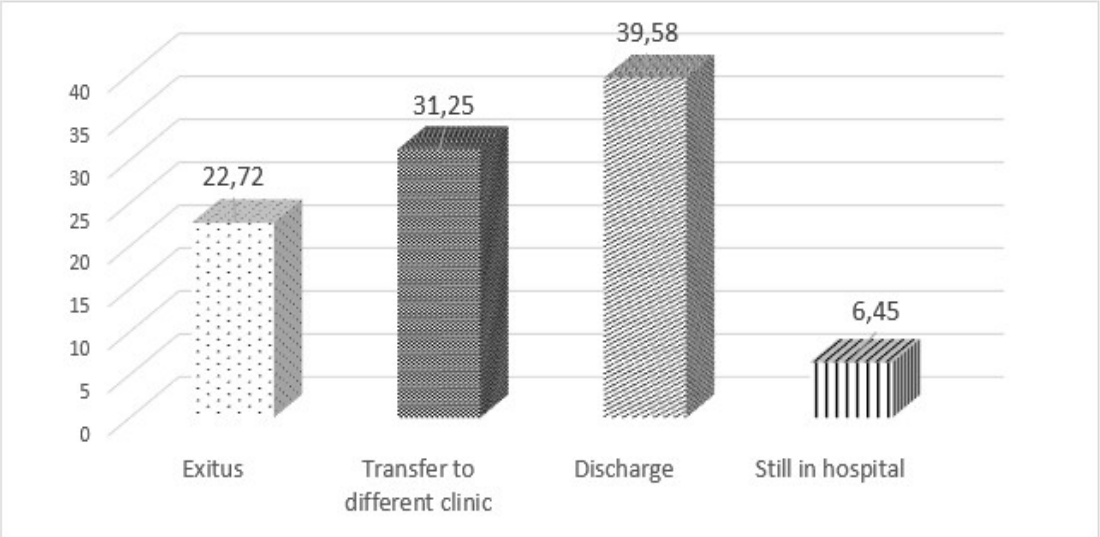
Graphic 1: Complaints of patients hospitalized in palliative care service in admission.



Graphic 2: Existing chronic diseases of patients in palliative care unit in admission.



Graphic 3: End of the status of patients in palliative care unit.



4. DISCUSSION

Today, the improvement of patient and elderly care along with the prolonged life span resulted in a population in need of longer care and support. Especially in our country, there is an increase in the number of patients from every age group who have a poor general condition, who need self-care, and who cannot be discharged from intensive care units to perform their care after intensive care treatment. For this purpose, home healthcare units and palliative care centers have been established in the world and our country, allowing the required to be provided outside the intensive care units. (4, 8)

Contrary to a general perception in the community, palliative care centers do not only serve individuals who are considered to be elderly and in need of care. All populations of young and elderly people with poor self-care, in need of rehabilitation or terminal period, are within the scope of palliative care center (1). Compared to the age values of other palliative care centers in our country, our palliative care unit has served a similar age group of patients. The youngest of the patients who were admitted to our clinic in 2018-2019 was 18 years old, while the oldest patient was 100 years old. Although the mean gender of different centers in Turkey is predominantly female, our clinic has nearly equal proportions of genders (5, 9).

The most common complaints of admission to our palliative care center were other reasons (dressing, aspiration requirement, physical therapy requirement, etc.), respiratory support, pain palliation, nutritional support, and decubitus ulcer/wounds. In addition to these diagnoses, cerebrovascular event, Alzheimer's disease, diabetes mellitus, and its complications, stomach cancer, lung cancer, pain and infectious diseases, other malignancies, post-traumatic rehabilitation and care, tetraplegia/paraplegia and Parkinson's disease, epilepsy, heart failure, etc. were the most common reasons for the patients' admissions on a chronic basis.

Even though the palliative care center outpatient clinic, family physicians and homecare centers mediate the admission process to the palliative centers, some of the admissions are from the emergency clinics. A study conducted in a training and research hospital in Istanbul found malnutrition, pain, poor general condition, percutaneous enterogastrostomy cannula problems, respiratory distress, etc. and underlying malignancy, neurological disorders, cardiac problems, the underlying diseases such as COPD, etc. as the most common indications for admission and hospitalization, as in our clinic (10). The rate of the patients diagnosed with end-stage malignancy and hospitalized in our palliative care unit was 25.9%. This rate is found to be similar to the rates of some palliative care centers located in different regions of Turkey (9). All the primary and paraneoplastic problems caused by malignancy constitute the reason for this increased hospitalization rate. Although the general opinion for this period is *"Any initiative will not help",* the need for patients for healthcare professionals increases after a certain stage due to nutrition disorders, pain and hemodynamic instability (11). In brief, this period can be summarized as a period that patients and their relatives should spend together with the recommendations of health professionals. The care and support training is provided to relatives of patients in need of care in our palliative care center as long as they are by their side. The rehabilitation process of the patient and their relatives is accelerated with this care, and the patient can be discharged when the physician deems it appropriate, and their care can easily be provided by their relatives who have the necessary training. For these reasons, the mean length of stay in our palliative care center is 32.84±51.59 days. The researchers showed the mean length of stay as 15 and 45 days in two different studies conducted in Turkey, respectively.(12) In another study conducted abroad, the researchers showed the mean length of stay as 14 days. (13) These number of hospitalization days show that there is no standard length of stay in palliative care units and the length of stay can be determined by the preferences of the palliative care center and the medical, as well as social needs of patients. A certain period of training is necessary for the patient's relative to be able to carry out home care, assimilate the care process and perform interventions easily in patients groups desired to be provided home care.

Our palliative care center in our hospital mostly admitted patients from the eastern Anatolia region due to its location in eastern Turkey. During this period, our center served not only Turkish citizens but also foreign citizens such as Syria (1 patient) and Madagascar (1 patient), albeit only a small number. The number of studies in the literature on care rates for foreign patients is limited. The result we obtained in our clinic is that the rate of foreign patient admissions is low. It appears that palliative care units are an issue that should be emphasized and taken care of for health tourism, which has attracted increasing interest in public hospitals in our country, especially recently.

In this study, the data of a successful palliative care center of a training and research hospital located in the east of Turkey were presented. With many palliative

care centers, such as our palliative care center, the treatment, care and rehabilitation of patients who need end-of-life and palliative care are performed, and we believe that more palliative care centers will be needed with the increase in the rates of malignant and chronic diseases in addition to the increase in the number of the population requiring care.

Conflict of Interest: The authors declare that no conflict of interest.

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Derleme/Review

MASTEKTOMİ SONRASI GELİŞEN LENFÖDEM VE TEDAVİ YAKLAŞIMI

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ÖZET

Lenfödem; primer olarak subkutan dokuda ve subfasial tabakada plazma proteinlerinin, ekstravaskuler kan elemanlarının, immunglobulin ve sitokinlerin olduğu sıvının anormal miktarda birikimi ile karakterize bir durumdur. Lenfatik taşıma kapasitenin üstünde sıvı birikimi veya yetersiz lenfatik transport sonucu lenfödem tablosu oluşur. Lenfödem kronik progresif bir hastalıktır. Dolayısıyla erken tanı ve tedavi oluşabilecek komplikasyonları (disabilite, enfeksiyon, depresyon, ağrı, malign transformasyon) önlemek adına önemlidir. Tedavinin temelini manuel lenfatik drenaj diye adlandırılan özel bir masaj tekniği, cilt bakımı, kompresyon bandajı ve egzersizler oluşturmaktadır. Lenfödem için uygulanan egzersizler genellikle; remedial egzersizler, kuvvetlendirme egzersizleri, aerobik egzersizler ve germe egzersizleridir. Verilecek egzersiz programıda kişiye özel düzenlenmelidir.

Anahtar kelimeler: Lenfödem, Kompleks Dekonjestif Fizyoterapi, Manuel Lenfatik Drenaj, Egzersiz, Tedavi

ABSTRACT

Lymphedema is a condition characterized by abnormal accumulation of fluid containing plasma proteins, extravascular blood elements, immunoglobulins and cytokines, primarily in the subcutaneous tissue and subfascial layer. Lymphedema occurs as a result of fluid accumulation above the lymphatic carrying capacity or insufficient lymphatic transport. Lymphedema is a chronic progressive disease. Therefore, early diagnosis and treatment are important to prevent complications (disability, infection, depression, pain, malignant transformation). The basis of the treatment is a special massage technique called manual lymphatic drainage, skin care, compression bandage and exercises. Exercises applied for lymphedema are generally; remedial exercises, strengthening exercises, aerobic exercises and stretching exercises. The exercise program to be given should be tailored to the individual.

Key words: Lymphedema, Complex Decongestive Physiotherapy, Manual Lymphatic Drainage, Exercise, Treatment

1. GİRİŞ

Meme kanseri, dünyada kadınlar arasında en sık (%31) görülen kanser türü olup kadınlarda kanserden ölüm nedenleri arasında ikinci sırada (%15) yer almaktadır (American Cancer Society, 2006). Türkiye' de, kadınlarda %24,1 ile en sık görülen kanser türü meme kanseridir (1). Meme kanseri tedavisinde meme dokusunun ve koltukaltındaki lenf nodlarının çıkarılması şeklinde yöntemler uygulanmaktadır. Meme kanserli hastalarda aksiller lenf nodu diseksiyonu sonrası diseksiyonlu kolda

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lenfödem oluşabilmektedir (2). Lenfödem; lenfatik dolaşım sisteminde malformasyon, edinsel bozukluklara veya gelişme geriliğiyle ilişkili olarak ortaya çıkan, intertisyel hücre aralıklarında proteinden zengin sıvının birikmesidir (3). Mastektomi sonrası komplikasyonlar arasında yer alan lenfödemin görülme oranı %15-20 dolaylarındadır (4-6). Aksillada 20-30 civarında lenf nodu bulunmaktadır. Aksillar lenf nodlarının diseksiyonu sonrası lenfatik akış bozulur. Bu yüzden diseke edilen lenf nodu sayısına ve ameliyat tipine bağlı olarak lenfödem gelişme olasılığı artar. Yine post-op uygulanan kemoterapi ve radyoterapinin de lenfödem riskini etkilediği bilinmektedir (7-9).

Lenfödem oluşan kolun bir kısmı veya tümü şişebilir. Hasta lenfödem olan tarafta ağrı, ağırlık ve hareket kısıtlılığı hissedebilir. Lenf akımı bozulduğu için lenf sıvısı birikir ve bakteriler bulaşıp şişlik olan tarafta enfeksiyona bile sebep olabilir. Lenfödem, kronik ve ilerleyici bir durum olup etkilenen ekstremitelerde tekrarlayan enfeksiyon riskinde artışlara ve fibrokeratinöz değişikliklere neden olabilmekte, bunun yansıra hastalarda ciddi fonksiyonel kısıtlılıklar ve psikolojik problemler yaratarak yaşam kalitelerinde ve benlik saygılarında azalmalara yol açabilmektedir.

Lenfödem tanısı konunca hemen tedavi programı düzenlenmelidir. Lenfödem ile bireysel olarak değerlendirilmelidir. Tedavinin temelini manuel lenfatik drenaj diye adlandırılan özel bir masaj tekniği, cilt bakımı, kompresyon bandajı ve egzersizler oluşturmaktadır (10). Ayrıca hastaya günlük yaşamda dikkat etmesi gereken konular mutlaka hatırlatılmalıdır. Özellikle ameliyat sonrası erken dönemde hastalara şişlik hakkında bilgi verilmelidir.

Lenfödemde Dikkat Edilmesi Gereken Konular

Cilt temiz tutulmalı ve iyice kurulanmalı, nemli bırakılmamalıdır. Cildin nemlendirilmesi için yağsız kremler ve losyonlar kullanılmalıdır. Deri yaralanmalarından, böcek ısırıklarından, kesik ve yanıklardan korunmalıdır.

Etkilenmiş tarafa manikür veya iğne yaptırılmamalıdır. Tırnakları keserken deriyi kesmemeye dikkat edilmelidir. Jilet kullanılmamalı, istenmeyen tüyler elektrikli tıraş makinesi yardımıyla alınmalıdır.

Bahçe işleri yaparken kesiklerden korunmak için mutlaka eldiven giyilmelidir. Sutyen, çamaşır, diğer giysiler ve takılar sıkı olmamalıdır. Bu giysilerin ciltte oluşturduğu kızarıklıklar lenf dolaşımının engellendiği anlamına gelmektedir. Geniş omuz askısı ve gerekiyorsa askının cilde değdiği yere pamuk veya ped yerleştirilmesi önerilebilir.

Uzun süren yolculuklarda dikkat edilmelidir. Uçak yolculuğu sırasında kol çorabı ve kompresyon bandajı mutlaka kullanılmalıdır.

Ayrıca lenf ödemli taraftan tansiyon da ölçülmemelidir. Gece uyurken etkilenmiş kolun üzerine yatmamaya özen gösterilmelidir.

Aşırı kilolardan kaçınılmalı, kilo fazlası varsa doktor ya da uzman tarafından hazırlanmış bir diyet programı uygulanmalıdır. Şişen taraf, tedavi ile normal veya normale yakın hale geldikten sonra da takibi ve bakımı devam etmelidir. Kollarında kızarıklık veya şişlik hissettiklerinde, hemen bir doktora başvurmaları söylenmelidir.

Lenfödemin ilk döneminde kolu yukarıda tutmak (kalp seviyesinin üstü) oldukça faydalı olmakla birlikte lenfödem sıklığı ve şiddeti arttığında tedaviye başka yöntemler de eklenmelidir.

2. LENFÖDEM VE TEDAVİ

Kompleks Dekonjestif Fizyoterapi

Lenfödem tedavisinde özellikle erken dönemde konservatif yaklaşımların kullanılması önerilir. Günümüzde konservatif tedavi yöntemleri olarak çeşitli fizyoterapi modaliteleri ve rehabilitasyon uygulamaları uygulanmaktadır. Kompleks dekonjestif fizyoterapi olarak adlandırılan bu yöntemler iki aşamadan oluşur. Faz 1 diye adlandırdığımız dönemde manuel lenfatik drenaj olarak bilinen özel masaj, çok katmanlı bandajlama, cilt bakımını ve bandaj ile birlikte çeşitli terapötik egzersizler uygulaması içeren tedavi aşamasıdır. Hacimde maksimum gerileme elde edildikten sonra ikinci aşamayı uygulayabiliriz. Faz 2 dediğimiz bu aşamaya koruma evresi denir ve ve cilt bakımı, kompresyon giysisi, kompresyon bandajı ve yine kompresyon giysisi ile yapılan egzersiz programlarını içermektedir (6). Manuel lenfatik drenaj, hassas bir masaj tekniğidir. Bu sadece el ve parmaklar tarafından nötr pH'da cilt losyonu ile yapılır. 30-45 mmHg basınç uygulayarak derinin hemen altındaki yüzeysel lenf damarları, öncelikle supraklaviküler lenfatikler uyarılır ve daha sonra ön ve arka aksilla-aksiller, aksilla-inguinal anostomoz, sisterna cyhli, proksimal kol ve son olarak sırasıyla distal kol ile tamamlanır. Manuel lenfatik drenajda, ödem sıvısı karşı tarafa aktarılır. Masaj aralığı 45-60 dakika olmalıdır. Manuel lenfatik drenaj kasların kasılmasını uyarır. Ayrıca lenf sıvısının atılmasını sağlayarak ödemi azaltır. Ayrıca bir diğer etkisi de doku fibrozunu

önlemesidir. Akut selülit, bakteriyolojik, viral veya mantar odaklı enfeksiyonlar, arteriyel veya venöz tıkanıklık, konjestif kalp yetmezliği ve böbrek fonksiyon bozukluğu gibi durumlarda manuel lenfatik drenaj kontrendikedir.

Tedavide kullanılabilecek alternatif yöntemler inceleyecek olursak bunlarda ilk akla gelen intermittan pnömotik kompresyon tedavisidir. Lenfödem tedavisinde tek başına kullanılması önerilmez. Bazı çalışmalarda intermittan pnömotik kompresyon tedavisinin sadece sıvıyı çözdüğü geride kalan proteinin tekrar sıvı birikimine sebep olabileceği gözlenmiştir. Bazı çalışmalarda ise proteinlerinde yer değiştirdiği görülmüştür (11).

Kinezyotapingin ise yüzeyel tabaka altında negatif basınç oluşturarak deriyi ve fasiayı kaldırarak lenfatik akımı artırarak etki ettiği düşünülmektedir.

Lazer; lenfatik akımı artırdığı, lenfangiogenezi artırdığı fibroblastları etkileyerek fibrozisi azalttığı düşünülmektedir (12). Ancak tedavinin metastaz veya relaps riskini değerlendiren bir çalışma yoktur.

Ekstracorporeal Shock Wave Therapy ise yüksek şiddetli basınç dalgalarının vücutta istenilen noktaya uygulanması şeklindeki tedavi yöntemidir. Önceki yıllarda böbrek taşı tedavisinde kullanılmış olup kemik dokudaki değişiklikleri gözlenmiştir (13).

Lenfödem tedavisinde istirahat basıncı düşük ve çalışma gücü yüksek bandajlar uygulanmalıdır (Şekil 1). Ayrıca istirahatte bandajlar düşük basınç yaptığı için sorun yaratmaz ve uzun süre kullanılırlar. Buna karşılık, elastik bandajlar yüksek dinlenme nedeniyle lenfatiklere zarar verirler (6).

Bandaj setleri sitokinet, parmak bandajı içermelidir. Altı cm, 8 cm ve 10 cm lenfödem bandajları kullanılır. İlk olarak sitokinet hastanın ekstremitesine giydirilir daha sonra, el ve parmaklara parmak bandajı uygulanır. Sonunda 6, 8 ve 10 cm'lik bandajlar parmak ucundan koltuk altına doğru olmak üzere distale maksimum basınç verecek şekilde sarılır (Şekil 1).

Bandaj cildi travmadan korur; venöz düzenler döngüsü, reflüyü önler ve venöz ve lenfatik transportu artırır (6).

Hastaya vereceğimiz egzersizler mutlaka bandaj sarılıyken veya bası giysisi giyilmişken yapılmalıdır.

Şekil 1. Lenfödemde kullanılan bandaj seti ve bandajla sarılmış bir ekstremite.

Egzersizin Etkisi

Egzersizler lenfödemli bölgede ritmik kas kontraksiyonu ve relaksasyonlarına neden olur. Kontraksiyonlarla lenfatik dönüşte artış sağlanır (14). Çalışmalarda hastalarda lenf drenajının özellikle derinin subcutis tabakasında ve subfasial kas kompartmanında azaldığı, azalmış kas aktivitesinin ekstremitedeki ödemin şiddeti ile korele olduğu gösterilmiştir (15).

Kuvvetlendirme egzersizlerinin de ayrıca lenf formasyonu artırarak dokulara arteriyel kan akımını stimule ettiği, aerobik egzersizlerin ise elde edilen sempatik tonus artışının lenf damarlarındaki düz kas kontraksiyonunu arttırdığı ve oluşan pozitif basınç etkisi ile lenf drenajın arttırılıp, uzun dönemli kontrol için fayda sağlandığı saptanmıştır (16,17). Egzersizlerin lenfanjiogeneziste de etkili olduğunu gösteren çalışma bulunmaktadır, ayrıca bir çalışmada inaktif durumdaki lenfatik damarları güçlendirdiği de bildirilmiştir (18).

Egzersiz intra-abdominal basınç artışı yaparak, ductus torasikusu uyararak venöz sisteme drene olan lenf volümünü arttırır. Solunum egzersizleri ilave edilerek elde edilen intratorasik basınç değişiklikleri yine

lenfatik akışın aktivasyonuna katkıda bulunmaktadır (14).

Egzersiz Her Hasta İçin Uygun Mudur?

Tedavi programının bireye özgü olarak planlanması gerekmektedir. Hastada lenfödemin derecesi, nedeni ve eşlik eden diğer sağlık problemleri sorgulanmalıdır. Kardiak hastalık, diyabet, artrit gibi sekonder sorunlar değerlendirilmeli ve risk fayda oranı göz önünde bulundurulmalıdır.

Hastaların egzersiz süresince de düzenli aralıklarla muayeneleri yapılarak ekstremite çap ve volüm değişiklikleri, cilt ve eklem hareket açıklıkları kontrol edilmeli, hastada ağırlık hissi, duyu değişiklikleri sorgulanmalı ve lenfödemin şiddeti kontrol edilmelidir. Ağrı, rahatsızlık ya da ödemde artış gözlemlendiği zaman durdurulması önerilmektedir.

Lenfödem için uygulanan egzersizler; remedial egzersizler, kuvvetlendirme egzersizleri, aerobik egzersizler ve germe egzersizleridir.

Remedial Egzersizler

"Remedial" egzersizler tekrarlayıcı kas kontraksiyonları şeklinde yapılan bir grup tekrarlayıcı egzersiz olarak tanımlanabilir (19). Bu egzersizler ilgili vücut bölümünün aktif, ritmik ve dirençli olmayan hareketlerini içerir. Çalışmalarda şişliğinin azaltılmasında etkili oldukları gösterilmiştir ancak halen bu egzersizlerin tek başına lenfödem gelişimini önleyebileceği veya şişliği azaltıp azaltmayacağı net değildir(20).

Remedial egzersizlerin etkinliğinin arttırılması için derin solunum egzersizleri (abdominal veya diyagragmatik egzersizler) ile kombine edilmesi önerilmektedir.

Kuvvetlendirme Egzersizleri

Kasların fonksiyonel kapasitesini artırmak, yorgunluğa olan dirençlerini arttırmak için kuvvetlendirme egzersizleri önerilmektedir (21). Kas yorgunluğunu önlemek amacıyla eğitime düşük ağırlıklarla başlanması, az tekrarlı ve aşamalı olarak ilerlenerek uygulanması gerekmektedir.

Kwan ve ark. tarafından hazırlanmış bir sistematik derleme çalışmasında meme kanseri sonrası kolunda lenfödem gelişen hastalarda yapılan direnç egzersizleri ile ilgili 7 çalışmanın üzerinde durulmaktadır. Bu çalışmaların altısı randomize kontrollü çalışma iken bir tanesi vaka-kontrol çalışması şeklindeydi. Bu çalışmalarda da dirençli egzersizlere ne zaman başlamalıyız sorusunun yanıtı netleşmemekle birlikte ameliyat sonrası hemen başlanılabileceğini çıkarabilmek mümkündür.

Geniş bir hasta popülasyonunda yapılan(n=295) fiziksel aktivite ve lenfödem çalışması meme kanserli hastalarda progresif ağırlık egzersizlerinin güvenliğini inceleyen bir diğer çalışmadır (22). Bir yıl boyunca izlemlerinin yapıldığı çalışmada, egzersiz grubundaki hastalara haftada 2 kez progresif ağırlık kaldırma egzersiz programı verilmiş. Primer sonuç ölçütü olarak kolda veya eldeki şişlik derecesindeki değişim olarak belirlenen çalışma sonunda başlangıçta lenfödemi olanlarda programın anlamlı olarak lenfödemin şiddetini etkilemediği, bunun yanı sıra hastalardaki semptomların şiddetinde azalma ve kas güçlerinde artışın saptandığı da ortaya konmuştur.

Genellikle hekim hastalar için sıklıkla çok düşük ağırlıkların kullanıldığı, düşük yüklenmeli direnç egzersizlerini tercih etmektedir. Çünkü meme kanseri sonrası opere olan hastalarda ağır yük kaldırma konusunda çok fazla endişe mevcuttur. Bu hastalarda orta-yüksek derecede direnç egzersizleri ile düşük yoğunluklu direnç egzersizlerinin etkinliğinin karşılaştırıldığı bir çalışmada iki grup arasında anlamlı bir fark olmadığı ayrıca orta-yüksek derecede egzersiz uygulanan grupta da lenfödemin şiddetinin artmadığı gösterilmiştir (23).

Direnç egzersizleri ile ilgili çalışmaların çoğu meme kanseri ilişkili lenbfödem le ilgili olsa da kanser sonrası alt ekstremite lenfödemi gelişen hastalarla ilgili yapılan bir çalışma da mevcuttur (24). Bu çalışmada egzersizlerinin uygulanabilirliği, güvenliği ve etkinliği araştırılmıştır. Haftada 2 kez yavaş artırılan progresif ağırlık kaldırma) egzersizi verilen grupta bacak volümünde hiçbir hastada klinik olarak anlamlı kötüleşme olmamış ve fonksiyonel durumda anlamlı gelişmeler olduğu gözlemlenmiştir. Ancak az sayıdaki hasta grubundaki iki hastada da selülit enfeksiyonun gelişmesi alt ekstremite lenfödeminde güvenliğini kanıtlayacak ileri randomize çalışmalara gereksinimin olduğunu düşündürmektedir. Yalnız egzersizler hastaya gösterilirken kompresyon bandajı veya giysisi ile birlikte yapılması gerekliliği hatırlatılmalıdır.

Aerobik Egzersizler

Aerobik egzersizler, büyük kas gruplarının katıldığı sürekli, ritmik ve dinamik egzersizlerdir. Aerobik egzersizlere örnek olarak, bisiklete binme, koşma ve yürümeyi örnek olarak verebiliriz. Otuz iki meme kanserli hasta ile yapılan randomize kontrollü bir çalışmada hastalar aerobik ve direnç egzersizlerin

birlikte verildiği egzersiz grubu ve genel bakim grubu olarak randomize edilmişler (25). Egzersizler 12 hafta boyunca 20 seans olacak şekilde düzenlenmiş ve başlangıçta, tedaviden hemen sonra ve 12 hafta sonra lenfödem ölçümlerinde değişiklik saptanmadığı bildirilmiştir.

Aerobik egzersizlerle yapılan diğer çalışmaları incelediğimizde de egzersizin lenfödem semptomlarını şiddetlendirmediğini görmekle birlikte hala bu konuda yeni çalışmalara ihtiyaç vardır (14,26).

Germe Egzersizleri

Germe egzersizleri, kasların ve bağ dokusunun gerilmesi yoluyla eklem hareket açıklığının korunması veya arttırılmasını sağlayan egzersizlerdir. Lenfatik dolaşım fonksiyonu sağlanması için kasların ve eklemlerin hareketliliğinin tam olması gerekmektedir. Lenfödemli bir hastada germe egzersizleri ile cilt skarları ve eklem kontraktürleri gibi lenfatik akımı azaltabilecek etkenler minimale indirilmiş olur.

Literatüre baktığımızda lenfödemli hastalarda tek başına germe egzersizlerinin etkinliğinin değerlendirildiği randomize kontrollü bir çalışmaya rastlamadık. Ancak 2020 de pilates ve dansın araştırıldığı randomize bir çalışmada pilates grubundaki hastalara verilen tedavi protokolü içerisine germe egzersizlerinin de ilave edildiğine rastladık (27). Buradan anlaşılıyor ki bu konuda yeni çalışmalar yapmak gerekiyor.

3. SONUÇ

Son olarak, meme kanseri olan tüm mastektomili hastalar lenfödem konusunda aydınlatılmalı ve eğitilmelidir. Yukarıda belirtilen korunma yöntemleri ile lenfödem gelişimini önlenmek için çalışılmalıdır. Lenfödem oluştuğunda ise uygun kompleks dekonjestif fizyoterapi ve o başlık altındaki çeşitli yöntemler kişiye özel olarak planlanmalıdır.

Çıkar çatışması: Bu çalışmada herhangi bir çıkar çatışması bulunmamaktadır.

Mali Destek: Bu çalışmada herhangi bir mali destek alınmamıştır.

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MOBILE BIATRIAL MYXOMA MIMICKING CARDIAC THROMBUS

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Abstract

Objective: Biatrial myxomas are extremely rare among the intracardiac masses. Because of the obstructive symptoms and risk of thromboembolic events, they should be surgically removed immediately. **Case:** We present a 47-year-old male patient who was treated successful surgery due to a mobile biatrial myxoma mimicking cardiac thrombus. The biatrial mass was successfully removed by classical open heart surgery. There were no complications. No recurrence was observed in the patient's two-year follow-up. **Conclusion:** The most important point we want to emphasize in this article is that rapid diagnosis and immediate removal of the mobile mass are vital in order to prevent systemic or pulmonary embolic events in these patients.

Keywords: Mobile intracardiac mass, biatrial myxoma, surgical remove, emergency surgery.

Özet

Giriş: Biatriyal miksomalar intrakardiyak kitleler arasında oldukça nadirdirler. Obstrüktif semptom oluşturmaları ve tromboemboli riskleri nedeniyle acilen cerrahi olarak çıkarılmalıdırlar. **Olgu:** Kardiyak trombüs benzeri mobil biatriyal miksoma nedeniyle başarılı cerrahi tedavi uygulanan 47 yaşındaki bir erkek hastayı sunuyoruz. Biatrial kitle klasik açık kalp cerrahisi ile başarılı bir şekilde çıkarıldı. Komplikasyon olmadı. Hastanın iki yıllık takibinde nüks gözlenmedi. **Sonuç:** Bu yazıda vurgulamak istediğimiz en önemli nokta, bu hastalarda sistemik veya pulmoner embolik olayları önlemek için tanının hızlıca konulması ve mobil kitlenin acil olarak çıkarılmasının hayati önem taşıdığıdır.

Anahtar Kelimeler: Mobil intrakardiyak kitle, biatriyal miksoma, cerrahi çıkarma, acil cerrahi

1. INTRODUCTION

Intracardiac myxoma is the most common benign tumor of the heart with an estimated incidence ranged from 8 to 150 per million annually and accounts for 30% to 50% of all primary tumors of the heart.[1,2] They most commonly originate in the left atrium (75%-80%) then in the right atrium (10%-20%). Biatrial myxoma is extremely rare (<%2,5).[2-4] We present a case of mobile biatrial myxoma mimicking cardiac thrombus who treated successful surgery.

2. CASE

A 47-year-old male patient, working as a manager in a factory, applied to our hospital with complaints of palpitations and chest pain for a week. He had no history of heart disease. On physical examination, heart rate was 96 beats/min and blood pressure was 116/75 mmHg. Heart sounds were normal on auscultation, and no systolic or diastolic murmur was detected. Electrocardiography was in normal sinus rhythm. On telegraphy, the cardiothoracic ratio was normal, and there were no pathological findings in the thorax and lungs. Laboratory analyzes were normal Transthoracic echocardiography revealed an irregular homogeneous mass of approximately 19x16 mm in the left atrium originating from the left side of the interatrial septum (IAS) and connected to the IAS by a stem.

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Another similar echogenic mass of approximately 19 x 32 mm in the right atrium was adhered to the right side of the IAS (Fig. 1). The right mass floated like a wing during the cardiac cycle and extended into the atrioventricular valve during diastole. We determined that the biatrial mass was connected via the fossa ovalis.

Figure 1: Transthoracic echocardiographic image of biatrial mass. Left and right faces arrows show the mass and its appendage in the left and right atrium (RV: Right ventricle).

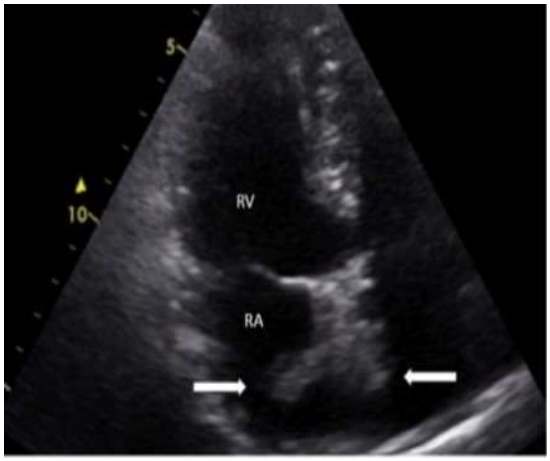
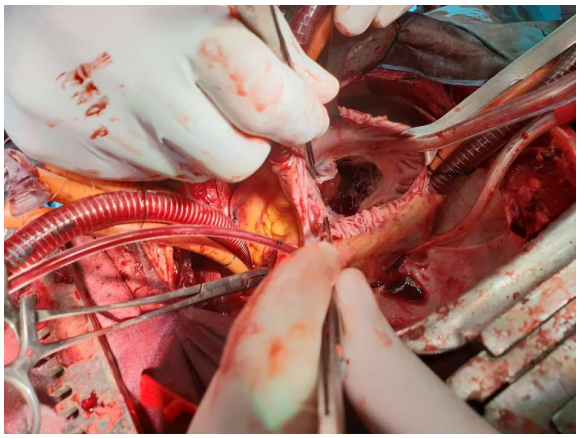


Figure 2: Operation image of the mass into the right atrium.



The surgery was performed under standard cardiopulmonary bypass. Tumors were found to be soft and fragile (Fig 2). Left and right atrial masses were completely excised, and the attached atrial septum was resected (Fig 3). The interatrial residual defect was closed with a continuous suturing technique using 4-0 prolene sutures. Histopathological examination confirmed the diagnosis of myxoma. The patient was discharged 1 week after surgery and no recurrence was observed during the 24-month follow-up period.

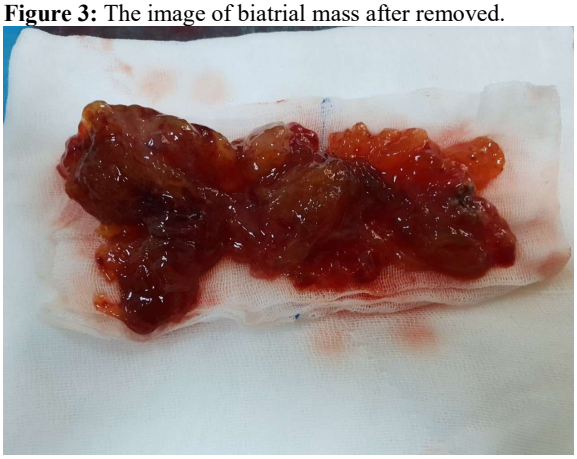
3. DISCUSSION

Myxoma is the most common primary tumor of the heart. Patients may present with symptoms of hemodynamic obstruction, embolization, or constitutional changes. Despite its benign character, it may lead to embolic events or even sudden death. Therefore, early diagnosis and quick treatment are mandatory to prevent life-threatening events in this patients.[2-4]

Echocardiographic examination is the primary diagnostic tool but in some cases further imaging modalities such as computed tomography or magnetic resonance imaging might be necessary for the further tissue characterization of the cardiac masses before planning a surgical intervention.[2] A subcostal view is strongly recommended as the interatrial septum is clearly shown and the masses in the both atriums are visible. It confirms the location and extension of the tumor as well as the site of attachment of the tumor.[2] Once the diagnosis is established, immediate surgical treatment is indicated in all patients to avoid further tumor embolism and valve obstruction. Prognosis is excellent after surgical excision. After surgery, regular follow-up with serial echocardiography is also very important to detect recurrence.[3,4]
The appendages of the myxoma are gelatinous and fragile. Therefore, they tend to break into pieces that may lead to systemic and pulmonary embolisms.[2,3] Because of this reason, once the diagnosis is confirmed, surgical excision of cardiac myxoma is required as soon as possible.

The patient did not have evident symptoms, and the tumors were small in size and did not obstruct the mitral and tricuspid valves, but floating in the both atria like thrombosis. Immediate surgical removal of the masses was necessary and was quickly performed. No recurrence of myxoma was observed during the two-year follow-up period.

Figure 3: The image of biatrial mass after removed.



4. CONCLUSION

Biatrial myxoma is a rare clinical situation. Surgical resection is the mainstay of treatment and recurrence is not reported. To avoid complications such as embolization, especially in the presence of mobile mass, surgical resection should be done urgently when diagnosed.

Conflict of Interest: The authors declare that no conflict of interest.

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