Özgün Araştırma / Original Article

Turk J Hip Surg 2021;1(2):56-60
doi: 10.5222/TJHS.2021.40085

Türkiye Kalça Cerrahisi Dergisi
Turk J Hip Surg

Patient Expectation and Satisfaction After Arthroscopic Debridement for Hip Osteoarthritis

Kalça Osteoartritinde Artroskopik Debridman Sonrası Hasta Memnuniyeti ve Hastanın Beklentisi

Berkay Yanık[1], Ali Asma[2], Onur Hapa[1]

[1]*Department of Orthopedics and Traumatology, Dokuz Eylul University, Izmir, Turkey*
[2]*Department of Orthopedics and Traumatology, Bakircay University Cigli Regional Education Hospital, Izmir, Turkey*

Geliş / Received: 12.06.2021 **Kabul / Accepted:** 16.07.2021 **Online Yayın / Published Online:** 10.08.2021

Cite as: Yanık B, Asma A, Hapa O. Patient expectation and satisfaction after arthroscopic debridement for hip osteoarthritis. Turk J Hip Surg 2021;1(2):56-60.

ABSTRACT

Objective: *The purpose of the present study was to evaluate the expectation and satisfaction of patients treated with hip arthroscopy for moderate to advanced hip osteoarthritis.*
Method: *Eighteen patients with Tönnis grade 2 or 3 hip osteoarthritis who were treated with hip arthroscopy and followed up for at least one year, were included in the study. All patients received partial labrum debridement with limited rim excision (3-5mm), chondroplasty and excision of osteophytes/cam lesion. Demographic data, education level, VAS scores, time to the last follow-up, expectation and satisfaction levels were evaluated.*
Results: *There was not any correlation between any parameters tested except a negative correlation between time to follow up and satisfaction level, time to follow-up and satisfaction point. When short-term follow-up patients were compared with longer term follow-up groups, patient satisfaction levels, and scores were higher.*
Conclusion: *Satisfaction levels of patients, treated with arthroscopic debridement for advanced hip osteoarthritis, is dependent on the follow-up time. Patients are satisfied up to 2 years postoperatively.*

Keywords: *hip arthroscopy, hip osteoarthritis, arthroscopic debridement, patient satisfaction*

ÖZ

Amaç: *Bu çalışmanın amacı, orta ve ileri derecede kalça osteoartriti nedeniyle kalça artroskopisi uygulanan hastaların beklentilerini ve memnuniyetini değerlendirmektir.*
Yöntem: *Kalça artroskopisi uygulanmış ve en az bir yıl takipli Tönnis evre 2 veya 3 kalça osteoartriti olan 18 hasta çalışmaya dahil edildi. Tüm hastalara sınırlı rim eksizyonu (3-5 mm), kondroplasti ve osteofit/kam lezyonu eksizyonu ile kısmi labrum debridmanı uygulandı. Demografik veriler, eğitim düzeyi, VAS puanları, son takibe kadar geçen süre, beklenti ve memnuniyet düzeyleri değerlendirildi.*
Bulgular: *Takip süresi ile memnuniyet düzeyi, takip süresi ile memnuniyet puanı arasında negatif korelasyon olması dışında test edilen parametreler arasında herhangi bir korelasyon yoktu. Kısa süreli takip edilen hastalar, daha uzun süreli takip edilen gruplarla karşılaştırıldığında, hasta memnuniyet düzeyleri ve puanları daha yüksekti.*
Sonuç: *İlerlemiş kalça osteoartriti nedeniyle artroskopik debridman ile tedavi edilen hastaların memnuniyet düzeyleri takip süresine bağlıdır. Hastalar ameliyat sonrasında 2 yıla kadar memnun kalmaktadır.*

Anahtar kelimeler: *kalça artroskopisi, kalça osteoartriti, artroskopik debridman, hasta memnuniyeti*

Sorumlu Yazar / Corresponding Author:
Berkay Yanık ✉ berkayyanik89@gmail.com

B. Yanık 0000-0003-4522-2662
A. Asma 0000-0002-6270-4578
O. Hapa 0000-0001-8154-658X

INTRODUCTION

The indications of hip arthroscopy are expanding to treat both intraarticular and extraarticular hip pathologies as diagnostic skill and surgical techniques evolve [1–3]. However, hip arthroscopy for the treatment of moderate to high grades of hip osteoarthritis is controversial in that most studies have indicated the necessity of conversion to hip arthroplasty within two years of surgery [4–11]. However, none assessed the patient's expectation and its effect on the final satisfaction and pain levels [8].

Arthroplasty literature has shown that the strongest predictor of postoperative dissatisfaction was failure to meet preoperative expectations of patients treated with total knee arthroplasty or higher expectations expressed by patients who reported greater pain relief only one year after total hip arthroplasty [12,13].

The purpose of the present study was to evaluate satisfaction level for patients treated with hip arthroscopy for femoroacetabular impingement (FAI) -induced moderate to high-grades of osteoarthritis and correlate it with various parameters like patient expectation, educational level, age, time to follow-up etc.

Our hypothesis was that higher expectation level would be correlated with lower satisfaction levels. Higher educational level, younger age, and lower body weight would be correlated with higher expectation and lower satisfaction levels.

PATIENTS AND METHODS

The institutional review board of Dokuz Eylül University hospital approved the study. Eighteen patients with Tönnis grade 2 or 3 hip osteoarthritis who were treated with hip arthroscopy and followed up for at least one year, were included in the study. Patients had hip pain that did not respond to conservative treatment. All cases were secondary to FAI. VAS scores were analyzed preoperatively, at 3, 6, and 12 months postoperatively with an average follow-up of 24 months [12-45]. The degree of osteoarthritis was evaluated by Tönnis grading system on plain pelvis radiographs. A single surgeon (O.H.) performed all of the operations. All patients received partial labrum debridement with limited rim excision (3-5mm), chondroplasty and excision of osteophytes/cam lesion **(Figure 1)**. No weight-bearing exercises with passive range of motion were started for 15 days after the surgery. Tolerable weight- bearing exercises were started afterwards.

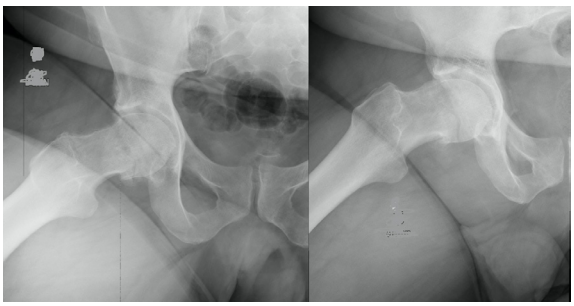

Fig 1. Post-operative and pre-operative dunn X rays of the patient.

Demographic data including age, gender, body mass index (BMI), education level (high level; university or above, low level; high school or below), and VAS scores (preoperatively, at 3, 6, and 12 months postoperatively), time to follow-up (long term: 24 months or more 'n:9', short term: 12-23 months, 'n:9') were recorded.

Patient expectations were assessed with 3 questions (total: 9 points); 1. How long do you think it will take you to recover fully after surgery? High expectation; 3 months or less (3 points), moderate: 4-12 months (2 points), low; 12 months or more (1 point) 2. How painful do you expect your hip to be when it fully recovered? High expectation: no pain (3 points), moderate; slight to moderate pain (2 points), low; very extremely painful. 3. To what extent do you expect your usual activities be restricted when you fully recovered? High expectation; sports participation (3 points), moderate; 1 hour walking or low-level sports participation (2 points), low; maximum 20 minutes walking (1 point).

Patient satisfaction was assessed at the latest follow-up with a question asking, 'How satisfied are you with your surgery?' Responses were: very satisfied (4 points), somewhat satisfied (3 points), somewhat dissatisfied (2 points), very dissatisfied (1 point) when they were asked to rate their satisfaction levels between 0 to 10 points (0 point dissatisfied to 10 points very satisfied).

Statistical analysis

Correlation analysis between variables was made using the Kendall correlation test. Mann-Whitney U test was used to compare high and low-level education, Tönnis grade 2 and 3 , long-, and short-term follow-up ($p<0.05$ was set as the level of statistically significance). Friedman test was used to detect differences between preoperative and postoperative 3., 6., 12. month -VAS scores. All statistical analysis was done with SPSS version 15.0 (Chicago, Ill).

RESULTS

The mean age of the patients was 39.4±10 years. Study population consisted of 13 male and 5 female patients. Mean BMI was 27±4kg/m^2. Mean follow-up period was 24±8 months. There were 11 Tönnis grade 2 and 7 grade 3 hips.

VAS, expectation, and satisfaction scores are summarized in **Table I**. There was not any correlation between any parameters tested (age, BMI, follow-up time, VAS scores, expectation and satisfaction scores and levels ($p>0.05$) excepting a negative correlation between time to follow up and satisfaction level (r: -0.48, p:0.012), or to the satisfaction score (r:-0.45, p:0.015). When comparisons were made between patients who were followed up for a short or a long-term, patient satisfaction levels, and scores were higher (3±0 vs 2±0 p:0.003, 7±1 vs 3±2, p:0.002) in the short- term follow-up group.

There was no difference between Tönnis grade 2 and 3 hips and groups with lower versus higher education levels ($p>0.05$).

There was a statistical difference in VAS scores of patients followed up between different time periods. A statistical difference was found between VASpreop and VAS 3.mo (p:0.001) and between VASpreop and VAS 6.mo (p:0.001).

DISCUSSION

Main findings of the present study were patient satisfaction levels for arthroscopic debridement of hip osteoarthritis which were dependent on the time to follow-up. Indeed, patients followed up for less than 24 months were more satisfied than those followed up for more than 24 months.

It is known that hip arthroscopy has yielded beneficial results in patients with mild osteoarthritis [14,15]. The role of hip arthroscopy for moderate to advanced hip osteoarthritis is controversial [9,16]. Most authors advocate hip arthroplasty for Tönnis grade ≥ 2 hip osteoarthritis instead of arthroscopy [5]. Risk factors for failed hip arthroscopy include older age, degree of osteoarthritis, obesity at the time of hip arthroscopy however few studies have also reported positive results in the presence of hip osteoarthritis [4,5,7,17,18].

Daivajna et al. [4], reported improved outcome scores in 56% of the patients with Tönnis grade 2 and 3 hip osteoarthritis for at least two years after the surgery. While 44% of the patients required total hip replacement at an average of 18 months after hip arthroscopy. In another study, Sansone et al. [18], reported improved outcomes in mild to moderate hip osteoarthritis and 82% of the patients were satisfied with their results at the end of the 2-year

Table I. Patient scores (mean±standard deviation (median)).

VAS(0-10)	preop	8±1(8)
	postop 3.mo	4±2(4)
	postop 6.mo	4±2(5)
	postop. 12. mo	6±3(7)
Expectation	recover point(1-3)	2±0(2)
	painless point(1-3)	2±0(2)
	function point(1-3)	2±0(2)
	total(3-9)	6±1(6)
Satisfaction	level(1-4)	2±0(3)
	point(0-10)	5±2(6)

follow-up. In the above-mentioned studies and none of the hip arthroscopy studies cited in the literature, effect of patient expectation on the patient satisfaction level and or pain relief has been reported [8]. Arthroplasty literature reported the relation between patient expectation and satisfaction and/or level of pain relief [12,13]. Gandhi et al. [13], reported that a greater expectation of pain relief with surgery predicted greater pain relief felt by patients treated with hip arthroplasty at the end of one year of follow-up. Bourne et al. [12], showed that for total knee arthroplasty, predictor of postoperative dissatisfaction was failure to meet preoperative expectations. Present study failed to show any relation between patient expectations and the amount of pain relief or level of patient satisfaction. However, similar to that reported in hip arthroscopy literature, patient satisfaction was only dependent on the postoperative follow-up time in that patients followed up for less than 24 months were more satisfied compared to those followed up for longer term which constituted the dissatisfied group. Additionally, present study failed to show the effect of education level, BMI and age on the level of expectation and satisfaction.

A recent retrospective comparative study, reported that 46 % of the patients with Tönnis grade 2 or 3 hip osteoarthritis treated with labral debridement and impingement survived at the end of 11 years of follow-up, and still advocated hip arthroscopy for younger (<40 years) and male patients even in the presence of osteoarthrosis [19].

Respondents to a most recent survey have indicated that arthroscopy is a viable option for patients over 40 years of age with mild osteoarthritis (Tönnis grade 1), and recommended mostly conservative treatment for Tönnis grade 3 osteoarthritis. Therapeutic role of arthroscopy in moderate osteoarthritis (Tönnis 2) remains unclear [20].

The study has some limitations. First, this is a retrospective study without any control group. A prospective study with questionnaires at different postoperative time frames would have been able to show the effects of the other parameters tested. Second, we did not quantify the amount of labrum or chondral damage intraoperatively instead classified the patients according to preoperative pelvis radiographs. However, all patients were operated by a single surgeon and received the similar surgical treatment.

Present study failed to show any relation between patient satisfaction and patient expectation and any other variables tested except for the time to follow-up. Patients followed up for less than 2 years were more satisfied than patients followed up for longer periods of time.

Ethics Committee Approval: The study was approved by Local Ethic Committee in Dokuz Eylul University (2016/31-29).
Conflict of Interest: None.
Funding: None.
Informed Consent: Not necessery.

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