

# Recurrent anterior shoulder instability: Why do the patients decide on the treatment late?

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## Abstract

**Aim:** Anterior shoulder instability is a condition that frequently occurs in young and active patients and reduces quality of life. In their daily practice, the authors have noticed that patients presenting to their clinic with anterior shoulder instability took longer to decide on treatment compared with reports in the literature. The aim of the present study was to investigate the reasons why patients who experience recurrent anterior shoulder instability delay treatment decisions in Turkey.

**Materials and Methods:** A total of 49 patients, who underwent arthroscopic repairs due to anterior shoulder instability between March 2015 and January 2019, were administered a survey prepared by the authors at regular patient follow-ups.

**Results:** Patients participating in this study experienced an average of 21.78 (range, 2–100) dislocations in the period from the first episode of dislocation to surgery. The mean time from the first dislocation to surgery was 5.5 years (range, 1–266 months). Academic degree, living area, distance from hospital, first dislocation time, first episode to surgery time, dislocation count, operation advising time after dislocation, patient decision after dislocation, type of surgery were statistically insignificant.

**Conclusion:** Patient responses to the survey questions indicated that delayed decisions for surgery resulted from concerns with absence from work. We believe that patients' inclination to delay surgery due to their work and financial concerns are understandable considering existing conditions in Turkey. The high number of patients examined daily in our country may be the most important reason for incomplete information of patients.

**Keywords:** Anterior; arthroscopy; bankart; instability; recurrent; shoulder

## INTRODUCTION

Anterior shoulder instability occurs frequently in young and active patients, and reduces their quality of life (1). The incidence of first-time traumatic anterior shoulder dislocation (FTASD) is around 23 per 100 000 person-years (2). The risk for recurrence is higher in young patients who experience their first dislocation before 25 years of age (3). According to recent studies the patients who are under 25 years old have high recurrent shoulder dislocation rates, and when they applied with first dislocation of shoulder surgical treatment is advised (4). The long-term success rates of arthroscopic techniques for the treatment of anterior shoulder instability have been reported in the literature (5–8). It is clear that patients with anterior shoulder instability opt for treatment following the first or after several episodes of dislocation (5,6,8,9). In our daily practice, we have found that patients presenting to our clinic with anterior shoulder instability were treated only after experiencing many repeated dislocations. In literature there are not too much studies about anterior

shoulder instability delayed treatment. The aim of the present study was to investigate why patients who experienced recurrent anterior shoulder instability delayed consultation/treatment in Turkey.

## MATERIALS and METHODS

The study protocol was approved by Scientific Research Ethics Committee of Gaziantep University Medical Faculty (2019/353) and the study was conducted in accordance with Declaration of Helsinki. A total of 82 patients, who underwent arthroscopic repair for anterior shoulder instability at the authors' clinic between March 2015 and January 2019, were included in the present study. Of the 82 patients, 28 could not be reached using the contact information they provided, and 5 did not agree to participate. Forty-nine patients, therefore, were surveyed using a questionnaire prepared by the authors at regular follow-ups. Patients demographics are shown in Table 1.

All patients had access to social security that would cover the costs of surgery and hospital stay.

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After patient demographic information was obtained, data regarding the time and treatment of the first episode of shoulder dislocations, total number of dislocations, reduction of subsequent recurrent dislocations, orthopedic outpatient clinic follow-ups, and treatment recommendations of physicians regarding recurrent shoulder dislocations were queried. All patients's academic degree, living area, distance from hospital, first dislocation time, first episode to surgery time, dislocation count, operation advising time after dislocation, patient decision about surgery after dislocation, technique of surgery and these parameters effect on treatment process were analysed statistically.

**Table 1. Patients demographics**

<b>Number of Patients</b>	n=49 (male n=45; female n=5)
<b>Age</b>	16-68y (mean age 31.14)
<b>Academic Degree</b>	
Illiterate	1
Primary school	7
Middle school	8
High school	16
University	17
<b>Living Area</b>	
City center	38
District center	9
Village	2
<b>Distance From Hospital</b>	
1-5 km	29
6-10 km	13
11-15 km	2
>15 km	5
<b>Occupation</b>	
Laborer	18
Self-employed	9
Civil servant	8
Military personnel	4
Student	4
Homemaker	2
Other	4

### Statistical Analysis

The data was analyzed by means of conducting a questionnaire with the intention of searching why the patients who applied to our clinic between 2015 and 2019 due to the complaint of recurrent traumatic sholder dislocation decided on the operation late.

Descriptive statistics were signified as average+-standard deviation, median (minimum-maximum) for continuous data (age), and n(%) for the questions including discrete results.

The correlation among the variants with regard to the reasons of late decision on the operation was viewed with chi square test by the way of combining the categories

of some questions involved in the study. The level of significance was accepted as  $p < 0.05$  in all statistical analysis and IBM SP 22.0 (IBMCorp, Armonk, NY, USA) software was used in the analysis.

### RESULTS

Participants experienced an average of 21.78 (range, 2–100) dislocations in the period from first dislocation to surgery. Four patients reported experiencing > 100 dislocations but did not provide an exact figure. The patients were asked about how many times they have shoulder dislocation. Considering the first dislocation times, after considering that the number of dislocations was over 100, the total dislocation numbers were assumed as 100.

The mean time from the first episode of dislocation to surgery was 5.5 years (range, 1-266 months). Thirty dislocations were reduced in hospital, 13 dislocations were reduced by the patients themselves, and 6 patients visited a bonesetter. Only 29 patients were examined by an orthopedic physician following the first dislocation. Five patients were not seen by any orthopedic physician until surgery due to recurrent dislocations.

When the 6 patients in whom shoulder dislocations were reduced by a bonesetter were questioned as to why they opted for consultation with a bonesetter, 1 reported that they believed orthopedic physicians were not knowledgeable about dislocation, 1 found bonesetters to be more reliable, and 4 reported that they consulted a bonesetter on the recommendation of others who had previously experienced a shoulder dislocation. All 6 of these patients reported that the bonesetter who performed reduction of the dislocations did not charge them.

Five patients (dislocations = 23, 5, 15, 50, and 18, respectively) with complaints of recurrent shoulder dislocation and examined by an orthopedic physician were not referred for surgery.

When the patients were asked why they delayed the decision for surgery, 9 expressed concerns about the negative impact on work, 8 were unaware that their complaints could be corrected by surgery, and 8 did not believe they delayed decision for surgery. Of all responses, 6 patients were afraid of undergoing surgery, 5 were not referred for surgery by their physician, 5 had financial problems, 4 believed that the postoperative recovery period was too long, 2 believed that the operation would not be successful, 1 experienced difficulty in finding medical support, and 1 was indifferent about the situation.

Academic degree ( $p=0.015$ ), living area ( $p= 0.905$ ), distance from hospital ( $p=0.484$ ), first dislocation time ( $p=0.200$ ), first episode to surgery time ( $p=0.270$ ), dislocation count ( $p=0.650$ ), operation advising time after dislocation ( $p=0.395$ ), patient decision after dislocation ( $p=0.680$ ), type of surgery ( $p=0.981$ ) were statistically insignificant. The all parameters that we investigate were not statistically significant and had not effect on patients's decision on treatment about recurrent shoulder dislocation.

## DISCUSSION

Recurrent anterior shoulder instability is especially common in young and active individuals (1). Surgical treatment for such a condition has been applied safely for many years. Today, arthroscopic techniques are applied more frequently for treatment. Comparison of our patients undergoing surgery with a diagnosis of recurrent anterior shoulder instability with those in the literature revealed that they experienced a significantly longer delay to surgery. This prompted us to investigate the reasons for delayed surgery decisions using a questionnaire prepared by us.

There are not many studies in literature about delayed treatment of anterior shoulder dislocations. In a similar study, Williams et al. investigated that who had private insurance and had the chance of early surgery and who had public insurance and treatment difficulties of patients with delayed treatment (10). In our study, all patients had public insurance so that they had chance to operate early.

In our study, the average number of dislocations, from the first dislocation to surgery, was 21.78 (range, 2–100). In this regard, Castagna et al. reported an average of only 5 recurrent dislocations (7). In a study by Ono et al., those with > 5 episodes of instability accounted for 33.32% of all patients (5). Kavaja et al. investigated 83 cases of recurrent shoulder instability and reported that 30% of patients experienced > 10 dislocations before surgery (8). In our study, > 10 recurrent dislocations occurred in 55% of patients.

The average time from the first dislocation to surgery was 5.5 years (range, 1–266 months), while studies by Castagna et al., Kavaja et al., Parmar et al., reported an average period of 3.8, 5, and 4.8 years, respectively (7,8,11). The time from the first dislocation to surgery in the present study was clearly longer than that reported in the literature.

Of the patients in this study, 38.8% opted for external sources for reduction of their dislocations. The fact that these patients were not examined by an orthopedic surgeon following the first episode of dislocation, and the absence of subsequent care, may have been the cause of recurrent dislocations. Only 29 of those who participated in our study visited an orthopedic physician following the first dislocation. The average number of dislocations in 5 patients who were not seen by an orthopedic physician until surgery was 17.2 (dislocations = 3, 3, 50, 20, and 10, respectively). When 3 of these 5 patients were asked why they delayed the decision for operation, they responded that they did not know that their condition could be corrected by surgical intervention.

In 12.3% of patients, the first and subsequent recurrent dislocations were reduced by bonesetters. All patients who visited bonesetters reported that they were not charged for services. All patients who underwent reduction performed by bonesetters resided in the city center. In Turkey, according to the Health Implementation Communiqué,

dated January 24, 2019, patients who visit state hospitals are charged 6 Turkish Lira (TL), those who present to training and research hospitals under the Ministry of Health are charged 7 TL, and those who visit university hospitals are charged 8 TL. No charge was requested from patients who visited the emergency department. In addition, patients are not charged any fees for surgery. It is unlikely that these patients' preference for bonesetters can be linked to financial problems because all visited the emergency department. Delayed treatment cannot be attributed to bonesetters because only a small number of patients opted for treatment from these individuals.

On the other hand, it was remarkable that 5 patients who visited an orthopedic physician with complaints of recurrent shoulder dislocation were not recommended surgery. In these patients, the average number of dislocations was 22.2 (dislocations = 23, 5, 15, 50, and 18, respectively). When asked why they delayed the decision for treatment, all 5 of these patients responded that they did not know that their condition could be corrected by surgery. Although this can be attributed to the high number of patients who are examined daily by orthopedic surgeons in our country, this is actually an important issue to be considered.

Of the responses as to why they delayed the decision for surgery, 9 patients voiced concerns about its negative impact on work and 5 had financial problems. Eighteen patients were wage earners doing physical labor. Five patients responded that delays in treatment were due to the expected long period of postoperative recovery. What these responses have in common appears to be patients' concerns about being away from work. The fact that there are still some national deficiencies in employee rights may be an explanation for the desire of patients not to be away from work for prolonged periods. These are social problems in the country and cannot be corrected medically.

Six patients were afraid to undergo an operation, and 8 reported that they did not believe that their decision for surgery was delayed. From the responses of these patients, we speculate that they had little—if any—knowledge about the subject, and that they were not adequately informed by the physicians/practitioners they visited. As we know the traumatic dislocation of shoulder is very painful process. There are many techniques are mentioned in literature to reduce the shoulder (12) and these maneuvers are also painful and when the patients have trauma with shoulder dislocation these processes make them scaring about treatment and they think that they will same painful process in operation.

## LIMITATIONS

Our study also has some limitations. Additional problems such as Hill-Sachs lesions, rotator cuff tears, biceps tendon problems were not asked to patients that they could not effect delayed treatment decision. Another limitation is that the patients counts in study are low because of

we could not reach all patients that they treated about recurrent shoulder dislocation before. The other limitation is that this is a questionnaire study and it contains some subjective parameters and questions.

## CONCLUSION

In conclusion, early intervention increases treatment success in patients who experience recurrent dislocations (4).

Patient responses to the survey questions indicated that delayed decisions for surgery resulted from concerns with absence from work. We believe that patients' inclination to delay surgery due to their work and financial concerns are understandable considering existing conditions in Turkey. The high number of patients examined daily in our country may be the most important reason for incomplete information of patients.

*Competing Interests: The authors declare that they have no competing interest.*

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