



비구 골절 1년 후 성생활 분석

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Sexual Activity at 1 Year after Acetabular Fracture

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Received November 24, 2016

Revised January 23, 2017

Accepted April 8, 2017

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Financial support: None.

Conflict of interests: None.

Purpose: Change in sexual activity after acetabular fracture has not been elucidated to date. Hence, the purpose of this study was to reveal: (1) how acetabular fracture affects the status of sexual activity; (2) how acetabular fracture affects patient satisfaction about sexual activity; and (3) what are the concerns of patients regarding sexual activity.

Materials and Methods: Between January 2014 and December 2014, a self-reported questionnaire was conducted with patients who had been sexually active before the treatment for acetabular fracture. Out of the nineteen patients who participated in the questionnaire, twelve men and three women were included for final analysis; patients who were treated conservatively were excluded.

Results: All patients had hip pain (mean visual analogue scale score, 2.9; range, 1-7) at 1 year after the trauma. Fourteen patients (93.3%, 14/15) resumed sexual activity within 1 year (mean, 3.9 months; range, 2-6 months). After excluding one patient who did not recover to allow sexual activity, the frequency of sex was decreased in 11 patients (78.6%, 11/14). Sexual satisfaction was decreased in seven patients (46.7%, 7/15). Old age was associated with decreased sexual satisfaction.

Conclusion: Half of the patients showed a decreased satisfaction from sexual activity after acetabular fracture, with hip pain being the most common problem. Although our study was a small, single-center study, it provides information regarding sexual activity of patients after acetabular fracture.

Key Words: Sexual activity, Acetabular fracture, Satisfaction

Introduction

Sexual activity is one of the most important activities of daily living (ADLs) in terms of personal health and happiness^{1,2)} because the problems related to sexual activity are associated with physical and emotional dissatisfaction and depression.³⁾ Studies on the problem related to sexual activity after pelvic ring injury, which is associated with injuries

to the neighboring structures can cause sexual problems,^{4,5)} have been reported often. In the sphere of an acetabular fracture, one study investigated sexual activity which was evaluated as one of the many outcomes following acetabular fractures.⁶⁾ However, it did not present detailed changes in sexual activity and concerns of patients with an acetabular fracture.

Because hip joint plays an important role in ADLs, an

acetabular fracture may result in disability in ADL.⁷⁾ Sexual activity might be affected by acetabular fractures. Nevertheless, little is known about how an acetabular fracture affects patients' sexual activity.

This study aimed to determine: (1) How an acetabular fracture affects the status of sexual activity; (2) How an acetabular fracture affects patients' sexual satisfaction; and (3) What are patients' concerns about sexual activity at 1 year after injury.

Materials and Methods

A patient-reported questionnaire was developed to address the concerns about sexual activity among patients who had an acetabular fracture. We modified the questionnaires developed by Yoon et al.⁸⁾ and Currey.⁹⁾ Our questionnaire comprised three parts (Appendix).

The first part included visual analogue scale (VAS) for pain, the time of resumption of sexual activity, change in the frequency of sex, change in the preferred sexual position, and reasons for changes in the frequency and sexual position. The second part included the changes in sexual satisfaction and the reasons for dissatisfaction. The third part included the information which the patients wanted to know about sexual activity.

Inclusion criterion was a solitary acetabular fracture without pelvic ring injury. Patients who had brain injury and genitourinary tract injury, sexual dysfunction before the injury and any other disease associated sexual dysfunction were excluded. From January 2014 to December 2014, 45 patients who were treated for an acetabular fracture at Seoul National University Bundang Hospital visited the out-patient clinic. Among them six patients, who did not have sex during the 6 months prior to the injury, were excluded.¹⁰⁾ The remaining 39 patients were asked to answer the questionnaire at 1 year after the injury. Twenty of the 39 patients refused to answer the questionnaire. Thus, 19 patients (48.7%, 19/39) agreed to participate in the study and they completed the questionnaire.

Among them, four patients who were treated conservatively were excluded. Finally, 15 patients who underwent

surgery were included in this study. There were 12 men with a mean age of 43.5 years (range, 30–63 years) and 3 women with a mean age of 45.4 years (range, 33–69 years). Eight patients had elementary fractures and 7 patients had associated fractures.¹¹⁾ The American Society of Anesthesiologists (ASA) score was 1 in nine patients and 2 in six patients. Eight patients underwent surgery via the Kocher–Langenbeck approach, 5 patients underwent surgery via the ilioinguinal approach, and the remaining two patients underwent surgery via the combined approach.

The quality of fracture reduction was classified into the following 4 groups: excellent, normal radiographic appearance; good, mild change with minimal joint narrowing (<1 mm) and sclerosis; fair, intermediate change with moderate joint narrowing (<50%); and poor, an advanced change, according to the Matta system,¹²⁾ by independent orthopedic surgeons (CH Park) who did not participate in the treatment. The reduction was excellent or good in 8 patients and fair in 7 patients (Table 1).

To maintain patients' privacy, questionnaires were enclosed in envelopes after the patients completed them, and they were collected by one physician assistant who was blind to the treatment of acetabular fracture.

Fisher's exact test and Mann–Whitney test were used to compare the categorical variables and the continuous variables, respectively. The change in satisfaction about sexual activity was dichotomized as increased/no change versus decreased/greatly decreased; and the quality of reduction was also dichotomized as excellent/good versus fair/poor. Statistical analysis was performed using IBM SPSS ver. 20.0 (IBM Co., Armonk, NY, USA). We considered p -values <0.05 to be statistically significant.

Results

At 1 year after the injury, all patients had hip pain and the mean VAS score was 2.9 (range, 1–7). Fourteen patients (93.3%, 14/15) resumed sexual activity within 1 year (mean, 3.9 months; range, 2–6 months). After excluding one patient who did not recover sexual activity, the frequency of sex was decreased in 11 patients (78.6%, 11/14). Reasons

for the decrease in the frequency of sex were fear of further injury (5 cases), hip pain (4 cases), easy fatigability (4 cases), decrease in libido (3 cases), non-cooperation of the sexual partner (1 case), and a shameful operation scar (1 case). Twelve patients (85.7%, 12/14) changed the preferred sexual position. Reasons for the change in the preferred sexual po-

sition were hip pain (7 cases), easy fatigability (5 cases), fear of further injury (5 cases), and decreased libido (2 cases). The most common problem during sexual activity was hip pain (53.3%, 8/15), followed by concerns of additional injury (46.7%, 7/15).

Seven patients (46.7%, 7/15) replied that sexual satisfaction was decreased or greatly decreased. Reasons for dissatisfaction with sexual activity were easy fatigability (5 cases), fear of further injury (4 cases), decreased libido (3 cases), hip pain (2 cases) and a shameful operation scar (1 case). Old age appeared as a negative predictor of sexual satisfaction (Table 2).

Twelve patients (80.0%, 12/15) could not obtain information on sexual activity after an acetabular fracture. Among the remaining three patients, two patients obtained information on sexual activity from other patients, and one patient obtained information on sexual activity from the Internet. None of the patients had consulted a physician for sexual activity. The most frequently obtained inquisitive information by patients was the safe sexual positions (7

Table 1. Type of Acetabular Fracture and the Quality of Reduction

Type of fracture	No. of patient (%)	Reduction quality (n)*
Elementary fractures		
Posterior wall fracture	6 (40.0)	Excellent (1) Good (3) Fair (2)
Transverse fracture	2 (13.3)	Good (1) Fair (1)
Associated fractures		
Both column fracture	4 (26.7)	Good (1) Fair (3)
Anterior column and posterior hemitransverse fracture	2 (13.3)	Excellent (1) Fair (1)
T-shaped fracture	1 (6.7)	Good (1)

*Classification according to the Matta system.¹²⁾

Table 2. Comparison of Sexual Satisfaction

Variable	Increased/no change group (n=8)	Decreased/greatly decreased group (n=7)	p-value
Age (yr)*	36.4±8.0	49.8±14.0	0.038
Gender			0.569
Men	7 (46.7)	5 (33.3)	
Women	1 (6.7)	2 (13.3)	
BMI (kg/m ²)*	23.1±3.5	23.9±3.1	0.639
Current VAS for pain*	2.0±0.9	3.9±2.1	0.051
Types of fracture			0.619
Elementary fractures	5 (33.3)	3 (20.0)	
Associated fractures	3 (20.0)	4 (26.7)	
Quality of reduction [†]			0.619
Excellent/good	5 (33.3)	3 (20.0)	
Fair/poor	3 (20.0)	4 (26.7)	
ASA score			0.315
1	6 (40.0)	3 (20.0)	
2	2 (13.3)	4 (26.7)	
Approach			0.947
Kocher-Langenbeck	4 (26.7)	4 (26.7)	
Ilioinguinal	3 (20.0)	2 (13.3)	
Combined	1 (6.7)	1 (6.7)	

Values are presented as mean±standard deviation or number (%). *Continuous variable. [†]Classification according to the Matta system.¹²⁾ BMI: body mass index, VAS: visual analogue scale, ASA: American Society of Anesthesiologists.

patients, 46.7%), followed by the safe time of resumption of sexual activity (5 patients, 33.3%).

Discussion

Problematic sexual activity is strongly associated with physical and emotional dissatisfaction and depression.³⁾ To the best of our knowledge, detailed changes in sexual activity after an acetabular fracture have not been studied. Therefore, we faced many difficulties when we consulted the patients about the problems of sexual activity. Moreover, we are not well placed to decide on how to educate the patients.

Some studies have evaluated sexual dysfunction after a pelvic fracture which was mostly related to the injury to reproductive organs.^{13,14)} Although Borg et al.⁶⁾ have developed a questionnaire including sexual life for patients with an acetabular fracture, they only described the degree of discomfort in sexual life, and they did not present the status of sexual activity after an acetabular fracture. Whereas our questionnaire was developed to document the changes in sexual activity before and after an acetabular fracture, and to investigate the patient concerns related to sexual activity.

In this study, most patients resumed sexual activity within 6 months after the injury. Hip pain was the most troublesome problem and the most cited concern during sexual activity. Although there was no statistically significant association in this study, hip pain could lead to a change in the preferred sexual position because sexual activity generally requires more range of motion of the hip joint than daily activities.¹⁵⁾

Old age only appeared as a negative predictor of sexual satisfaction. This is considered to be a comparable result with the previous studies, which reported that older age is the most important negative predictor of clinical outcome after an acetabular fracture.^{16,17)} Whereas fracture type, ASA score and surgical approach did not affect sexual satisfaction in our study.

Generally speaking, most patients are reticent about discussing sexual concerns with physicians,^{2,18)} which is considered to be a stronger tendency in the Korean society than in the Western society because of cultural circumstances.

As shown in the present study, none of the patients obtained information on his or her concerns from medical personnel. Instead, they obtained the information from another source to maintain privacy. However, studies on the quality of medical information provided by the Internet show that it is often misleading and has poor quality, which means that patients may be provided with incorrect information.¹⁹⁻²¹⁾

Our patients wanted to know about safe sexual positions, followed by safe time of resumption of sexual activity. Consequently, the physician must educate the patients about resumption of sexual activity and safe sexual positions by providing appropriate information for reducing patients' stress and improving satisfaction before patients request for the advice.

This study has several limitations, which are inherent to this type of study. First, there might be recall bias because the evaluation was performed at 1 year after the injury by use of a questionnaire. Second, the response rate was too low and the number of patients was too small to conduct a further statistical analysis.

Conclusion

Sexual activity is an important dimension of quality of life. As this study is the first study to assess the changes in sexual activity after an acetabular fracture, sexual frequency declined in 78.6% of patients, 46.7% of patients had decreased sexual satisfaction after the injury, and 85.7% of patients changed their preferred sexual position due to hip pain and easy fatigability. Sexual problem has been overlooked in patients who sustain an acetabular fracture. Medical personnel should provide the patients with relevant information to alleviate their concerns and enhance satisfaction. Our study is valuable as it provides baseline information about patients' sexual activity after an acetabular fracture.

요 약

목적: 비구 골절 후 환자들의 성생활에 어떤 변화가 있는지 알아보고, 환자들의 만족도에 어떤 영향을 주며, 성생활에 대한 환자들의 걱정이 무엇인지 알아보고자 한다.

대상 및 방법: 2014년 1월부터 12월까지 비구 골절로 치료받은 환자 중 수술 전에 성생활에 문제가 없었던 환자를 대상으로 자가 작성 설문 조사를 시행하였다. 19명이 설문 작성에 응하였으며, 보존적 치료를 시행한 4명을 제외하고 남성 12명, 여성 3명이 연구에 포함되었다.

결과: 비구 골절 수술 후 1년에 모든 환자에서 통증(평균 visual analogue scale 지수, 2.9; 범위, 1-7)이 있었으며, 14명(93.3%)의 환자는 1년 이내(평균, 3.9개월; 범위, 2-6개월)에 성생활을 시작하였다. 성생활을 시작하지 못한 1명의 환자를 제외하고, 11명의 환자(78.6%)에서 성생활의 빈도가 감소하였다. 성생활의 만족도는 7명(46.7%)의 환자에서 감소하였는데, 나이가 많을수록 만족도가 감소하였다.

결론: 전체 환자 중 절반에서 성생활의 만족도가 감소함을 나타냈고, 통증이 비구 골절 후 성생활에 있어 가장 문제임을 알 수 있다. 비록 이 연구는 단일기관에서 적은 환자를 대상으로 하였다는 단점이 있으나 이 연구는 비구 골절 후 환자들의 성생활에 대한 정보를 제공한다.

색인 단어: 성생활, 비구 골절, 만족도

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