

A Retrospective Study to Evaluate the Outcome of Patients with Shoulder Pain

Ashish Chauhan¹, Tanushri^{2*}

¹Lecturer, Department of Physiotherapy,
Sri Ram Murti Smarak Institute of Paramedical Sciences, Bhojipura, Bareilly, U.P., India.

^{2*}Associate Professor, Department of Dentistry,
Varun Arjun Medical College, Banthara, Shahjahanpur, U.P., India.

ABSTRACT

Background: Shoulder pain is a mutual and A debilitating diagnosis that people present with in health care that has a 1-year prevalence of up to 47% amongst the adult population. Strong evidence is found that high intensity pain and Middle Ages are related with poor outcomes. The present study aimed to evaluate the best predictors of patient outcome with shoulder pain.

Materials and Methods: The present retrospective study was conducted in the Department of orthopedics for a period of 2 years. Presence of anterior or posterior drawer tests were regarded as indicative of shoulder instability. Severe motion loss was considered if the patient had greater than 50% lack of the normal physiological range of motion. Patient's were screened on the basis of treatment received, treatment frequency, history, physical examination, presence of comorbidities and quickdash score. All the data was arranged in a excel spreadsheet and analyzed using SPSS software. Probability value of less than 0.05 was regarded as significant.

Results: There were a total of 130 subjects in the study. There were 55 females and 75 males in the study. The mean height of the subjects was 171.65+/-9.22cm and the mean weight of

84.32+/-19.82 Kgs. There was a significant change in the quickdash score amongst the subjects. The number of visits to the doctor also showed significant effect.

Conclusion: The quickdash score and the frequency of visits to the health care center were important predictors of the patient outcome in our study.

Keywords: Comorbidities, Shoulder, Physiological.

*Correspondence to:

Dr. Tanushri,
Associate Professor,
Department of Dentistry,
Varun Arjun Medical College,
Banthara, Shahjahanpur, U.P., India.

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INTRODUCTION

Shoulder pain is a mutual and A debilitating diagnosis that people present with in health care that has a 1-year prevalence of up to 47% amongst the adult population.¹ It is second to low back pain in popularity of musculoskeletal diseases for those seeking medical care.² Shoulder pain is commonly not associated with favorable outcomes in roughly 40-50% of all new cases of shoulder pain patients presenting to the primary care hospital, and report symptoms even 6 to 12 months later.³⁻⁵ As per a systematic search of the literature found 16 studies that fixated on the prognosis of the shoulder diseases; only six, were chosen as "high quality".⁶ Strong evidence is found that high intensity pain and middle ages are related with poor outcomes. There is moderate evidence to show that prognostic factors for shoulder pain like long time of complaints, and high disability score at baseline values result in a poor outcome at primary care.⁶⁻⁸ Different prognostic factors were regarded in these 16 studies like gender, mode of injury, psychological factors, work stresses, anatomical

factors and impairment of motion and strength.⁶ However most of the prognostic factors were found only at baseline. There is convincing evidence in the studies indicating that exercise and patient education reduces pain and improves the functional outcome during short-term and long-term follow-up amongst patients with impingement syndrome.^{9,10} The present study aimed to evaluate the best predictors of patient outcome with shoulder pain.

MATERIALS AND METHODS

The present retrospective study was conducted in the Department of orthopedics for a period of 2 years. The study was approved by the institutional ethical board. The quickdash score for disability tracking was used to rate the disability of upper extremity. It is a 11-item disability scale that ranges from 0 indicating no disability to 100 indicating severe disability. Subjects with history of shoulder surgery, neurological damage, instability, severe loss of

motion were excluded from the study. Presence of anterior or posterior drawer tests were regarded as indicative of shoulder instability. Severe motion loss was considered if the patient had greater than 50% lack of the normal physiological range of motion. Patient's were screened on the basis of treatment received, treatment frequency, history, physical examination, presence of comorbidities and quickdash score. The variables that were extracted were age, height, duration of symptoms, pain levels and quickdash score. The variables were recorded as 0 or 1 based upon their presence or absence. Different treatment modalities assessed based on whether the patient received that type of treatment or not. All the data was arranged in a excel spreadsheet and analyzed using SPSS software. Probability value of less than 0.05 was regarded as significant.

RESULTS

Table 1 shows the study characteristics of the subjects. There were a total of 130 subjects in the study. There were 55 females and 75 males in the study. The mean height of the subjects was 171.65 \pm 9.22cm and the mean weight of 84.32 \pm 19.82 Kgs. There were 80 subjects who had limited shoulder movement. The mean pain score amongst the subjects was 5.71 \pm 1.96. There were 10 subjects who were alcoholics, 85 were tobacco chewers. There were 20 subjects with diabetes. The mean change in quickdash score after treatment was 15.89 \pm 10.22. The mean number of total visits was 12.17 \pm 5.43 and the mean visits per week was 2.10 \pm 0.73. There was a significant change in the quickdash score amongst the subjects. The number of visits to the doctor also showed significant effect.

Table 1: Study characteristics

Category	Variable	Mean \pm SD	Present	Absent
	Change in quick dash score	15.89 \pm 10.22		
Comorbidities	Alcohol		10	120
	Tobacco		85	45
	Diabetes		20	110
Demographic	Age	52.10 \pm 11.54		
	Gender		55 females	75 males
	Height	171.65 \pm 9.22		
	Weight	84.32 \pm 19.82		
Physical examination	Limited shoulder movement		80	50
	Pain	5.71 \pm 1.96		
Treatment frequency	Total visits	12.17 \pm 5.43		
	Visits per week	2.10 \pm 0.73		

DISCUSSION

Studies to govern which interventions and issues contribute to positive outcomes with rehabilitation is widely spreading but there have been no consistent results. Different interventions like mobilization, modalities, and stretching exercises are normally employed for the management of shoulder impingement syndrome with lesser evidence to support their exact usefulness.¹¹ Clinicians are often asked with questions regarding the prognostic factors that will affect a subject's positive outcome. The action of early effect to rehabilitation has shown limited evidence in the prediction of long-term outcomes. Scientists have investigated the actions of early self-reported alterations in levels of incapacity and pain levels amongst patients with back pain that seek chiropractic care.¹² As per a study by, Axen et al,¹² They found that significant improvement in pain and disability after second visit elevated the odds of a positive management outcome by 2.9 odds ratio when compared with subjects with no improvement. This response was further studied amongst 2422 subjects who presented with multiple musculoskeletal situations to chiropractors in United Kingdom over a study period of 8-year period.¹³ The best forecaster of a positive results at the tenth visit amongst those subjects with persistent musculoskeletal pain was improvement at the fifth visit. These researchers suggested that early alterations may be more crucial as predictors in the musculoskeletal conditions than the variables that are measured at baseline.¹³

Previous studies had shown drastic changes during early intervention, which was constant with our clinical results.¹⁴ In our study, there are a total of 130 subjects in the study. There were 55 females and 75 males in the study. The mean height of the subjects was 171.65 \pm 9.22cm and the mean weight of 84.32 \pm 19.82 Kgs. There were 80 subjects who had limited shoulder movement. The mean pain score amongst the subjects was 5.71 \pm 1.96. There were 10 subjects who were alcoholics, 85 were tobacco chewers. There were 20 subjects with diabetes. The mean change in quickdash score after treatment was 15.89 \pm 10.22. the mean number of total visits was 12.17 \pm 5.43 and the mean visits per week was 2.10 \pm 0.73. There was a significant change in the quickdash score amongst the subjects. The number of visits to the doctor also showed significant effect. The present study was associated with few limitations. Missing data is the most commonly found limitation of retrospective studies that was also found in the present study. Another limitation was that the present study was concentrated to a specific set of population there was lack of generalizability of the data.

CONCLUSION

The present study aimed to evaluate the best predictors of patient outcome with shoulder pain. The quickdash score and the frequency of visits to the health care center were important predictors of the patient outcome in our study.

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