Evaluation of Outcome of Subjects with Shoulder Pain- A Retrospective Analysis

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**Abstract**

**Background:** Shoulder pain is usually not related with favorable outcome in approximately 40-50% of all cases presenting to the primary health care hospital. Different prognostic factors have been regarded in few of the 16 studies like sex, type of injury, psychological factors, stresses, anatomical factors and impairment of strength. The aim of the present study was to evaluate the predictors of subject outcome with shoulder pain. **Subjects and Methods:** The present retrospective analysis was performed in the orthopedic department for a duration of 2 years. Anterior or posterior drawer tests were used to indicate the shoulder instability. Severe loss of motion was regarded when the patient had loss of more than 50% of the normal physiological motion range. Different treatment modalities were evaluated based on whether the patient needed that type of treatment or not. All the data thus obtained was arranged in a tabulated form and analyzed using SPSS software. Probability value of less than 0.05 was regarded as significant. **Results:** The mean change in quickdash score after treatment was 16.76±9.21. The mean number of total visits was 12.43±5.28 and the mean visits per week was 2.25±0.62. There was a significant change in the quickdash score amongst the subjects. The number of visits to the doctor also showed significant effect. The presence of comorbidities also showed a significant difference amongst the subjects. **Conclusion:** The best predictors found in the study were the quickdash score and the incidence of visits to the health care services.

**Keywords:** Comorbidities, shoulder, physiological.

**Introduction**

Pain in shoulder is a chronic and debilitating condition that people often present with in the health care systems. It has a 1-year prevalence of around 47% in the adult population.³ It is considered second commonest problem after low back pain in musculoskeletal disorders for those needing medical advice.⁴ Shoulder pain is usually not related with favorable outcome in approximately 40-50% of all cases presenting to the primary health care hospital, and some report symptoms even 6 to 12 months after.⁴-⁵ According to a systematic literature review, it was found in 16 studies that indicated the prognosis of shoulder disorders; only six, had fallen into “high quality” category.⁶ Strong evidences are found that high level pain and Middle Ages are associated with poor outcomes. There is moderate proof to prove that prognostic factors for this type of pain like duration of pain, and high disability score during the baseline values lead to a poor outcome at primary care centers.⁷-⁸ Different prognostic factors have been regarded in few of the 16 studies like sex, type of injury, psychological factors, stresses, anatomical factors and impairment of strength.⁹ However majority of the prognostic factors were only noted at baseline. There is undoubted evidence in the studies that indicates that exercise and education decreases pain and recovers the functional outcome during short-term and long-term follow-up period amongst the subjects with impingement syndrome.⁹,¹⁰ The aim of the present study was to evaluate the predictors of subject outcome with shoulder pain.

**Subjects and Methods**

The present retrospective analysis was performed in the orthopedic department for a duration of 2 years. Ethical committee clearance was obtained from the institutional ethical board. To measure and rate disability of upper extremity, the quickdash score was used. It is a 11-value disability scale that varies between 0 representing no disability to 100 representing severe disability. Patients with history of surgery of shoulder, neurological problem, instability, severe motion loss were not included in the study. Anterior or posterior drawer tests were used to indicate the shoulder instability. Severe loss of motion was regarded when the patient had loss of more than 50% of the normal physiological motion range. Patients were partitioned on the basis of treatment they received, frequency of treatment, history, physical evaluation, presence of associated comorbidities and the quickdash score. The variables that were obtained from the medical records were age, height, symptoms duration, pain level and quickdash score. The variables were noted as 0 or 1 on the basis of the presence or absence of symptom. Different
treatment modalities were evaluated based on whether the patient needed that type of treatment or not. All the data thus obtained was arranged in a tabulated form 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 50 females and 80 males in the study. The mean height of the subjects was 172.65+/-.9.23 cm and the mean weight of 85.30+/-.19.77 Kgs. There were 90 subjects who had limited shoulder movement. The mean pain score amongst the subjects was 5.63+/-.1.87. There were 15 subjects who were alcoholics, 90 were tobacco chewers. There were 20 subjects with diabetes. The mean change in quickdash score after treatment was 16.76+/-.9.21. The mean number of total visits was 12.43+/-.5.28 and the mean visits per week was 2.25+/-.0.62. There was a significant change in the quickdash score amongst the subjects. The number of visits to the doctor also showed significant effect. The presence of comorbidities also showed a significant difference amongst the subjects.

<table>
<thead>
<tr>
<th>Category</th>
<th>Variable</th>
<th>Mean+/-.SD</th>
<th>Present</th>
<th>Absent</th>
<th>P value</th>
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</thead>
<tbody>
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<td>Comorbidities</td>
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<td>115</td>
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<td>Alcohol</td>
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<td>115</td>
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<td>Tobacco</td>
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<td>80 males</td>
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<tr>
<td></td>
<td>Gender</td>
<td>172.65+/-.9.23</td>
<td>50 females</td>
<td>80 males</td>
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<tr>
<td></td>
<td>Weight</td>
<td>85.30+/-.19.77</td>
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<td>Physical examination</td>
<td>Limited shoulder movement</td>
<td>5.63+/-.1.87</td>
<td>12.43+/-.5.28</td>
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<tr>
<td></td>
<td>Pain</td>
<td>12.43+/-.5.28</td>
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</tbody>
</table>

Discussion

Studies that regulate which intrusions and issues subsidize to positive outcomes with rehabilitation are widely scattering but with no consistent results. Different interventions like mobilization, treatment modalities and stretching exercises are normally used for managing shoulder impingement syndrome with fewer evidence to support their exact helpfulness. Physicians are often asked with queries regarding the prognostic factors that will alter a subject’s outcome. The action of early use of rehabilitation has indicated limited proof in predicting the long-term outcomes. Clinicians have investigated the activities of early self-reported changes in levels of incapacity and pain level amongst subjects with back pain that seek chiropractic care. According to a study by, Axen et al., significant improvement was seen in pain and disability after second visit, that elevated the odds of a positive management outcome by a figure of 2.9 odds ratio when compared with patients with no improvement. This effect was further studied in 2422 subjects that presented with multiple musculoskeletal problems to chiropractors in the United Kingdom over a period of 8-year period.

The best predictor of a positive outcome at the tenth visit in those patients with persistent musculoskeletal pain was improvement at fifth visit. These investigators suggest that early changes may be more critical as predictors in the musculoskeletal diseases than the factors that are measured at baseline. Past studies have shown drastic alterations during early intervention, that was constant with our clinical results. In our study, There were a total of 130 subjects in the study. There were 50 females and 80 males in the study. The mean height of the subjects was 172.65+/-.9.23 cm and the mean weight of 85.30+/-.19.77 Kgs. There were 90 subjects who had limited shoulder movement. The mean pain score amongst the subjects was 5.63+/-.1.87. There were 15 subjects who were alcoholics, 90 were tobacco chewers. There were 20 subjects with diabetes. The mean change in quickdash score after treatment was 16.76+/-.9.21. The mean number of total visits was 12.43+/-.5.28 and the mean visits per week was 2.25+/-.0.62. There was a significant change in the quickdash score amongst the subjects. The number of visits to the doctor also showed significant effect. The presence of comorbidities also showed a significant difference amongst the subjects. There were few limitations of the present study. In retrospective studies, missing data is the most commonly found limitation. Another limitation was that the present study evaluated only a specific group of subjects, there was absence of generalizability of the information.

Conclusion

Shoulder pain is a commonly encountered condition amongst the physicians. The present study evaluated the best factors of subject outcome with shoulder pain. The best predictors found in the study were the quickdash score and the incidence of visits to the health care services.

References


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