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ORIGINAL ARTICLE

REHABILITATION OF A PATIENT WITH MULTIPLE FRACTURES CAUSED BY TRACTOR RUNNING OVER HALF OF THE BODY: A CASE REPORT

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ABSTRACT

Introduction: A case of 48 year old female patient with multiple fractures at right shoulder, chest and Pelvis was admitted in BGS Global hospital Kengeri, Bangalore. The patient met with an accident in which a tractor passed though half of her body leading to multiple fractures. As most of the fractures were turned out to be stable the patient was given painkillers and calcium tablets and started physiotherapy after 1 week. **Methodology:** Physiotherapy was started with Ankle Toe Movements, ROM exercise, sponge ball exercise, Incentive spirometry, Trunk rotation exercises, and gentle massage on the injured areas. The patient was given gait training in later stage followed by exercises in walker. Pre and post assessment taken for muscle power of shoulder and hip, Visual Analogue Scale for body pain and Functional Independent Measures to find the outcome. **Result:** After 8 weeks of daily physiotherapy, the patient improved with muscle power, reduced body pain, improved body function and the patient started walking without any assistive devices. **Conclusion:** With immediate physiotherapy even with multiple fractures the patients can get back to their Activities of Daily Living.

Keywords: Fracture Rehabilitation, Muscle Power, Visual Analogue Scale, Functional Independent Measures, Activities of Daily Living,

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INTRODUCTION

A 48 year old female patient named Niveditha who was housewife by profession presented with pain on pubis and upper back region along with right shoulder and right area of chest. History of present illness showed that on 6th December 2018, patient went to pond to immerse a god idol after a prayer when a tractor passed through half of her body. She was immediately shifted to BGS global hospital Kengeri, Bangalore, where X ray was taken and it was found that she had multiple fractures of ribs, pelvis, neck of femur and both pubic rami. Along with that she had also sustained injury on the spine of scapula. But all the fractures were found to be stable. Her shoulder was immobilized in a sling for a week whereas, for remaining fractures painkillers and calcium tablets were advised by Orthopedician¹. She was then started on physiotherapy protocol.

METHODOLOGY

Before the physiotherapy treatment pre values were taken for Pain using VAS scale, MMT for muscle power of shoulder and hip and functional Independence through Functional Independence measure^{2,3,4}. Physiotherapy was started with ankle toe movements⁵, limited Range of Motion exercises for right upper and lower limbs and full ROM exercises for left upper and lower limbs⁶. Patient was advised for bed rest to prevent pressure sores and she was kept in air Bed⁷. For the fingers, patient was given a sponge ball and was advised to squeeze it at least 3 times a day (1 set of 10 repetitions each time)⁸. As patient was depressed she was given psychological counselling⁹. The patient had mild pleural effusion for which she was given incentive spirometry (1 set of 10 repetitions each time) twice a day¹⁰.

On 3rd week the repeat X ray was taken on which it was seen that fractures were not healed completely. The shoulder sling was removed and trunk rotation exercises were started carefully with 15 degrees of spinal rotation¹¹.

On 4th week, patient's preparation for sitting was started. Initially patient was brought to inclined position by placing 2 pillows over her entire back to avoid the postural hypotension, which could have occurred had the patient been brought to 90° supine lying directly. The numbers of pillows were weekly increased to increase the inclination. By 8th week patient was made to sit 90°. After that the patient was slowly brought to long sitting¹².

Once long sitting was achieved, high sitting training was started¹³. Then sitting to standing practice was started for the patient with the support from the physiotherapist¹⁴. Once the patient was comfortable in standing position she was made to stand for more time with the help of walker and it was followed by walking few steps with the help of walker¹⁵. Slowly the patient could walk herself with the help of walker.

On 8th week, a repeat X ray was done which showed healed fractures. The patient was then taught weight lifting and weight bearing exercises¹⁶. The patient started walking without any walking aids. At this stage the post outcome measures scores were taken [Table 1] which showed good improvement. Patient was already off the medications except calcium tablets and she was not taking even painkillers. The patient was then taught home exercises and regular physiotherapy was stopped.

RESULTS

Outcome Measures	Pre	Post
MMT		
Shoulder		
1.Flexion	3	3
2.Abduction	4	5
3.Extension	4	5
Hip		
All Muscle Groups	4	5
VAS Score (Whole body)	8	0
FIM	48	100

Table 1: Pre and Post Values of Outcome Measures

Ethical Clearance: Ethical clearance has obtained from BGS Global hospital Kengeri, Bangalore to conduct this study.

Conflict of interest: There was no conflict of interest to conduct this study.

Fund for the study: It was a self financed study.

CONCLUSION

Early physiotherapy intervention is quite helpful for improving the functional independence of patient even in multiple fracture case. ROM exercises, Bed Mobility, Trunk rotation exercises, functional reeducation along with psychological counselling can help a great deal to make the patient independent.

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