

Case Report

Community based rehabilitation by paraplegic - a case report

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ABSTRACT

A journey of a young man started from day one in the hospital. When he came with the traumatic paraplegia, no doubt a paraplegic has to face a lot of challenges in his life when he came to know that his both legs are not working. He became bedridden and his moral is also become down for his future planning. But we accept the challenge, a team work by an orthopaedician and a physio-occupational therapist make it little easier.

Postoperatively we prefer to offer rehabilitation through community base programme. Inspiration of hospital environment and equipment are going to help him for such kind of programme he accepts the challenge, basic aim of providing this programme is to reduce duration as well as incurred monitor losses.

Special attraction of this case report is homemade bicycle, which served the purpose of providing repetitive rhythmic mobilisation of bilateral lower limbs which facilitates normal pattern of ambulation. Now he is ambulatory and goes back to his work. So, a person with spinal cord injury involved with their community with a little modification in his activity and equipment is worth for him.

Traumatic paraplegia offers a big challenge to physio- occupational therapist due to long term recovery it takes. For Such patients on regular follow up till complete recovery, we preferred community based rehabilitation. This made him independent and incurred reduced monetary losses.

Keywords: Community based rehabilitation, Paraplegia, Physiotherapy

INTRODUCTION

Rehabilitation

I cried because I did not have a pair of shoes, till I met a person who did not have legs. This is what we have to think of, when we talk of physically handicapped. Rehabilitation means, fullest restoration of the individual to his physical, social, psychological, emotional and vocational abilities. This include education, training and employment of physical handicapped. The person with disabilities Act 1995 has defined rehabilitation as a process aimed at enabling person with disabilities to

reach and maintained their optimal physical, sensory intellectual and social functional Level.¹

Community based rehabilitation (CBR)

Community based rehabilitation is a process with in a community for the rehabilitation equalization of opportunity and social integration of people with disability.² Following are members of CBR- The disabled people themselves, their family, their friends, the local health, educational and socio vocational services which helps the rehabilitation professionals in the common goal of achieving independence among the disabled group of individuals. In 1990 WHO devised a strategy of service delivering to overcome deficits in other models of

rehabilitation and published a manual entitled training in the community for people with disabilities and CBR evolved out of the concept. In recognition of this, the ESCAP (economic and social commission for Asia and the Pacific) had declared the decade 1993-2002 the Asia and Pacific decade for the disabled.²

The goals of CBR

- Creation of a positive attitude towards people with disabilities
- Provision of rehabilitation services
- Provision of education and training opportunities
- Creation of micro and macro income- generation opportunities
- Provision of long term care facilities
- Prevention of causes of disabilities
- Monitoring and evaluation

CASE REPORT

A 33 years old male patient admitted in male orthopedic ward, with complaint of pain in lower back, weakness in both lower limbs, loss of sensation in lower limbs with bladder and bowel involvement due to road side accident.

The patient was given lumber belt and advised strict bed rest. He was kept on NSAID, plenty of IV. Fluid and catheterisation was done. All necessary parameters were monitored and in next two days his x-ray and MRI were done. It was found to have spinal cord compression at D-10 level as shown in Figure 1.



Figure 1: MRI of spinal cord compression at D10 level.

Patient was made fit for decompression operative procedure in which, at D9-D10 level laminectomy was done. Post operatively physiotherapist was called for further rehabilitation of the patient.

Participation of physio-occupational therapist is vital and important in rehabilitation of such cord compression patients.

DISCUSSION

From first post-operative day, we started with passive mobilisation of hip, knee and ankle joints. This included hip flexion of only 90°, change of position every one hourly and deep breathing exercise for first three days' post operatively. Mobilisation also helps to prevent heterotrophic ossification which is prime complication in spinal cord injury. With the above protocol patient was made to sit in bed with taylor's spinal brace on, for next one month and intermittent clamping to catheter every two hourly was followed in the ward. On 14th post of day catheter was removed and patient able to pass urine. On next day patient was discharged from hospital.

Before discharge patient was advised to follow the regular physiotherapy at home.

At home, he did exercise with the help of his relatives, on discharge patient had grade 0 power in his both lower limbs. After a gap of one month he came for follow up we observed moderate spasticity in his lower limbs which is a sign of improvement. We changed the exercise pattern and the patient was advised to continue previous exercise with some modification in the form of preventing spasticity and facilitation for active limb movement. For further one month he was advised to do cycling in the department. He assured me to follow all the given instruction at his place.

With the help of relatives and friends, at his home, he has developed oneself made bicycle which is shown in Figure 2 below.



Figure 2: Self-made static bicycle.

It is fabricated locally and is made up of metal bars, wheels and peddles obtained from old broken bicycle and one plastic chair where he used for sitting and it all costed him just Rs.200. On this specially made bicycle he followed two hourly self-mobilisation exercise protocol.

His innovative ideas came from this department when we kept him on stationary bicycle in his first follow up. He strictly followed same pattern for the next one month.

Results were obvious when he came after a month on his second follow up. People from his village are very much cooperative and with focused attention for rehabilitation. Being a therapist we are extremely happy to see these results. This time we built his confidence for ambulation. Due to self-made bicycle, he has developed, reciprocal alternate movement of both lower limbs. This further helped in his walking. Now he is walking with the help of walker as shown in Figure 3 below.



Figure 3: Ambulatory phase with walker.

This improvement was seen in just three and half months. A young patient became independent in his activity of daily living, in less span of time with his own effort, is a great achievement. This was possible as the rehabilitation was done at his own home with help of his relatives and community people. This has saved his lot of time and money as he was not required to come in hospital off and on. In recent follow up patient is walking with the tripod stick.

Community-based rehabilitation (CBR) programmes have been described as highly effective means of promoting the rights and opportunities of persons with disabilities (PwD). Although CBR is often the main way in which PwD in low-income and middle-income countries access rehabilitation services, there is little literature providing rigorous evaluation of their impact on peoples' well-being.⁵ The positive aspects of CBR, included promoting positive attitude of society and community towards people with disabilities, while the problems of CBR were lack of community concern and lack of financial support or donors.⁶

CBR was based on a thorough study of the living conditions and of the abilities and needs among persons with disabilities in the developing countries. CBR is a strategy defining a new entry point. Action to improve the quality of life of disabled persons would no longer be based in highly specialised institutions away from the mainstream; it would be available next to those who

needed them. Community mobilisation was identified as important. Changing the entry point also implied very thorough changes in the entire traditional system, including existing policies; supporting the empowerment of persons with disabilities and their organizations, providing better opportunities, and promoting their human rights. Using that entry point, each country should develop its own culturally adapted policies, plans, actions and services in a future system based on needs assessments.⁷ People who have spinal cord injury can learn to take part in family life, play, go to school, work and become involved with their community. They may require assistance or some equipment to do some of these activities.⁸

CONCLUSION

To conclude it can be said that community based rehabilitation is equally or more effective than hospital based rehabilitation. In CBR, the patient is in his own local environment. This helps in boosting his morale which leads to rapid recovery. As the patient spared off the effort of daily coming to the hospital, it saves money and time both.

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REFERENCES

1. Chandra AK. Introduction to physiotherapy and rehabilitation treatment, 1st ed. Neha publishing house; 1998;151-152.
2. Sunder S. Text book of Rehabilitation, 3rd ed. Jaypee brothers; 2010:28-32.
3. Lal S, Hamilton BB, Heinemann A. Risk factor for heterotrophic ossification in spinal cord injury, Arch Phys Med Rehabil. 1989;70(5):387-90.
4. Catherine A. Radomski TV. Occupational therapy for physical dysfunction. 5th ed. Lippincott Williams and Wilkins; 2002:981-983.
5. Mauro V, Biggeri M, Deepak S. The effectiveness of community based rehabilitation programmes: an impact evaluation of a quasi-randomised trial. J Epidemiol Comm Health. 2014;68:1102-8.
6. Cheausuwantavee T. Community based rehabilitation in Thailand: current situation and development. Asia Pacific Disability Rehabilitation J. 2005;16(1):51-67.
7. Helander E. The origins of community-based rehabilitation. Asia Pacific Disability Rehabilitation J. 2007;18(2):3-32
8. Promoting independence following a spinal cord injury: a WHO manual for mid-level rehabilitation workers: 1996.

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