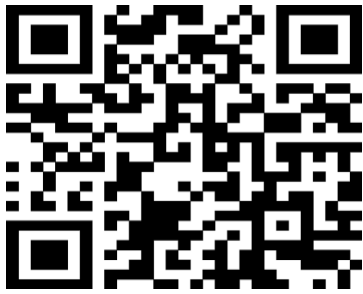


Functional Independence of Bilateral above Knee Amputee with Stubbies Prosthesis - A Single Case study

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ABSTRACT

An adult male, 23 years old who met with an accident and loss his both limb above knee, finding difficulty in ambulation and dependent for transfers & ambulation. He was suggested by his relatives to seek medical opinion and it was decided to give a stubbies prosthesis by keeping in mind the stability & ambulation factors. Although height of patient reduces, he becomes totally independent in his Activities of Daily living as well as the ambulation and using public utility services.

Keywords: Ambulation, stubbies prosthesis, Functional Independence, Rehabilitation, Public Utility Services

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INTRODUCTION

Now a day road traffic accidents are quite common. Due to road traffic accidents so many young energetic person losing their body parts & become dependent for Activities of Daily Living & ambulation on others.

Loss of Bilateral lower extremities affects the ambulation and psychological status of the person. Loss of bilateral Lower extremities from above knee leads problems in ambulation for person with disability. Two types of prosthesis can be use for the such kind of person.

1.High tech prosthesis in which patient's height is not affected but when ever patient wants to go for ambulation he needs assistance in form of family member or caregivers. Patient remains dependent for the ambulation. There is high risk of fall associated with it.

2.Another prosthesis is stubbies prosthesis which will decrease height of patient but more stable than the high tech prosthesis. After complete rehabilitation training he become independent for his ambulation. There is a less risk of fall with stubbies.

Rehabilitation of the person with loss of Bilateral Lower extremities is more difficult than loss of one lower extremity as Lower extremities mainly responsible for the stability. As we know stability is the need for mobility. With proper mobility only person can ambulate.

Best rehabilitation is possible when we get both stability & mobility at their best level.



A male of 23 years of age, who was working in chemical factory, belonging to low socioeconomic status, was intelligent man, with good communication skills.

He met with an accident when he was going back to his home after job. He has loss both his legs above knee level. The possibility is there he can be ambulate with regular high tech Above knee prosthesis but he become ambulate on the cost of stability & high chance of fall were there as he finds difficulty to balance himself on prosthesis.

EXAMINATION

- The patient is examined by the clinical therapist for the joint integrity and strength of the remaining part of the body.
- Range of motion of the all joints of the body
- Manual muscle testing of the bilateral upper extremities, trunk and bilateral Hip joint
- Physical examination shows that patient has proper range of motion of all joints & good strength of all required musculature.
- Patient is also examined by the prosthetic & Orthotic professionals for the proper healed stump and advance availability of possible prosthesis for him.
- X-ray of pelvis showed both hips contained and no abnormality in both hip.
- Patient is also assessed with functional independence measure, Locomotor capability index basic and advanced at three levels i.e at the time of admission, after one month of rehabilitation, after two month of rehabilitation.
- Patient's stump measured and casting done of the stump so that proper fitted stubbies prosthesis can be made.

- Until the prosthesis get ready patient sent to the physiotherapy department where upper

MANAGEMENT

- strengthening exercise given to person with initially low weight high repetition and progress toward maximum weight low repetition.
- With upper extremity strength training abdominals and back, side trunk strengthening exercise has been taught to the person.
- Balance training with stump static and dynamic started so that whenever the prosthesis is ready person can balance himself on prosthesis.
- As prosthesis was ready donning and doffing of the prosthesis taught to the person as well as also made him aware about the care of prosthesis and stump the prosthesis fitted.
- Psychological counseling of the person had been done for acceptance of the stubbles with proper explanation about risk of fall, maintenance of prosthesis, independency in life.
- Then physical therapist had started the balance training of person on prosthesis and gradually gait training and balancing started first in parallel bar, walker , bilateral Elbow crutches, single stick and then independent walk.
- With gait training person also advised to visit occupational therapy
- department where he had been taught easy way for Activities of daily living with prosthesis and repetition of the ADLS so he become more confident about his life.
- After completion of gait training step wise person also shifter to public utility services training centre where he became aware about how to use public transport services with ease if he had any

difficulty with use of public utility services then it had been resolved by the therapist.

- After two months of training every exercise protocol, necessary advises explained to the person.

RESULT

The patient is now independent for more than a year, taking up a job and comfortable with Stubbies throughout the day.

Table no. 1

Particular	At Admission	After 1month	After 2month
Functional Independent Measure Score	102	111	116
Locomotor Capability Index(LCI)	0	8	24
LCI Basic Activities	0	7	16
LCI Advanced Activities	0	1	8



DISCUSSION

As the stubbies prosthesis has given successful result with this patient. We have also tried same type of prosthesis for another two person one male & female which have also shown good results with person independency. But we have large population to be treated further more care report is necessary to be sure that stubbies prosthesis is more successful than high tech prosthesis.

CONCLUSION

The stubbies prosthesis is better option of Bilateral above knee amputation for the ambulation of the person. After complete rehabilitation person becomes independent not only activities of daily living but also in using the Public transport services.

DECLARATION OF PATIENT CONSENT

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

CONFLICTS OF INTEREST

There are no conflicts of interest.

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