

## **PRE AND POST-OPERATIVE CARE OF AMPUTEE**

**M.M. MALLA. MBBS (Pat.), PRCS (Glasg.), FRCS (Edin.), Major, RNAMC.**

**Chief Surgeon and Head of the Department of Surgery,  
Military Hospital, Kathmandu.**

In this country, we see many amputees walking without any limb prosthesis. There are very few amputees who could afford to enjoy the luxury of having a limb prosthesis. We have just started a Prosthesis Center, the first of its kind in Nepal. I hope that this center will be of great service to the amputees.

I need not say anything here about the various types of amputations and their indications. Sir William Ferguson of Edinburgh used to say that amputation is 'one of the meanest and yet one of the greatest operations in surgery.'

In this article, I would like to restrict myself to the pre and post operative care of the amputees. Most of the amputations are done in the lower limb, therefore, I shall be writing about the lower limb amputees. Now a days, there is great emphasis given in early rehabilitation of the amputees. This is necessary to prevent the loss of morale, muscle atrophy, soft tissue contractures and stump oedema. The success of this regime depends upon the physical and psychological preparation of the patient. For this we should form a team which should include the surgeons, the physiotherapists, limb-fitting experts, and the nurses. There must be full co-operation between those people.

It is a difficult task to fit the artificial limb to the stump of the limbs amputated by different surgeons. To make the amputation a success, one should follow a definite plan. For descriptive purposes, this can be divided into three phases.

1. The Preoperative Phase.
2. The Postoperative Phase.
3. The Metal Pylon Phase.

#### **The Preoperative Phase:**

During this period the patient must be prepared psychologically. The patient must be explained why his limb is being amputated. The patient must be given physiotherapy. He should be up for the greater part of the day and must be encouraged to walk with or without the crutches or some other aids. A simulated pylon can be strapped to diseased limb to give the patient the sensation of balancing on a prosthesis.

The Principles of this treatment are:

- a. Prevention or correction of contractures of the hips and the knees. If the contractures are present they should be corrected as much as possible by correct exercises. The patient should have firm boards under the mattress. He must be taught to appreciate the correct posture and position in bed. If the heel is sore, a foam wedge can be placed under the leg just proximal to the heel. The patient should lie prone thirty minutes every day.
- b. prevention of post operative complications. Breathing exercises are given. If the patient is confined to bed, free exercises are given to the other leg to prevent venous thrombosis.
- c. The patient must be given a programme of exercises to build up his trunk and limb muscles.
- d. The patient must be educated to walk with aids such as elbow-crutches. He should be taught to appreciate the sensation of ischial weight bearing and weight in the single leg. This is helped by the use of the simulated pylon if available.

#### **The Postoperative Phase:**

It is a good idea to apply an ischial bearing total contact plaster socket as soon as the skin is sutured. This has a soft end-bearing inside and a metal junction outside to which a pylon is fitted. It is supported by light elastic belt.

The postoperative phase will last for two weeks. For the first three days the patient is treated in the ward. Nursing staff should know the physical treatment of the patient. As soon as the patient is ready he is taken to the therapy department and is encouraged to stand in the bars and begin full-weight bearing education.

Usually 24 hours after operation, the temporary pylon is fitted to the plaster socket. The patient is encouraged to stand out of bed supported by the nurses. The first standing period may

last for 5 to 10 minutes. It will be less painful if the nurse supports the prosthesis by gently pressing it to keep it closely applied to the stump and the ischial tuberosity. The idea behind this procedure is to re-establish the patient's equilibrium early, making full use of afferent impulses. It is important, therefore, that the bodyweight is taken through the ischial tuberosity. This treatment is given three times a day. As soon as the patient can stand without the help of the nurses and on crutches he is taught to transfer weight from side to side.

The patient should be taught to do breathing exercises. He should be encouraged to cough forcefully. These help to prevent the pulmonary complications.

Another thing which should be done during this phase of treatment is to teach extension exercises to the patient. He should lie prone and do the exercises. The patient must be encouraged to move freely in bed to prevent pressure sores. The hip should not be flexed to prevent the plaster sore.

#### **The Metal Pylon Phase:**

After 14 days the plaster socket is removed. Sutures are cut. The wound should heal. If there is no oedema he is given pylon with a metal socket. This is supported by a pelvic band. The patient should again start walking first with the help of parallel bars, then with the help of arm crutches and then with sticks.

If the patient wishes to remove the pylon during the night, the stump should be bandaged. The technique of this bandage is important. It needs practice.

The patient should progress to walking with sticks and should learn to climb the stairs.

If at any time the pylon is causing discomfort, it should be taken off. It is usual for the stump to shrink, so that the socket gradually becomes large. If this is the case, the patient will have pain in the region of the adductor tendon. This discomfort is overcome by giving the patient one or more stump socks to wear.

These are the main principles behind the management of the amputee. While we are dealing with amputations, we should keep this in mind that we are treating not only the amputated limb but the individual as a whole. The success of the operation does not end with the completion of amputation but it depends upon how independent the patient is and how little is his disability in spite of the amputation.

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