

## Use of Audio-Visual aids in teaching post operative exercises to person affected by Leprosy

PANKAJ GUPTA\*

*\*The Leprosy Mission Community Hospital, Delhi, India*

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### Introduction

With wider use of multi drug therapy the milestone of leprosy elimination in India was achieved in December 2005. But as per statistics, around one million leprosy-affected patients with disability are living in India. The national leprosy elimination programme was started in 1983 and leprosy services were integrated into the general health services in 2004, with the aim that leprosy patients would avail the services at their nearest community health centre.<sup>1</sup> The national leprosy eradication programme is implemented in all districts throughout India, but still a lot of patients migrate to metropolitan cities and higher centres in search of better treatment and management of leprosy and related complications.

Delhi, being the capital of India, attracts a large number of leprosy patients for treatment, diagnosis and leprosy-related complications from various states of India and from neighbouring countries as well.<sup>2</sup> Some of the patients who come to Delhi are from the states, where their first language is not Hindi. Because of this migratory population, language plays a role in availing treatment and management.<sup>3</sup> As the TLM Community Hospital is one of the referral centres for reconstructive surgery in leprosy, so other hospitals also receive patients for the management of various leprosy-related complications across India.<sup>1</sup>

### The case

The present case is presented in the context of the post-operative rehabilitation of tendon transfer surgery of the hand and the use of audio-visual aids in teaching isolation exercises. Being a referral centre for reconstructive surgery, TLM Nandnagri hospital regularly organises camps for impairment correction, of the eyes, hands and feet. Such a camp was organised on 5<sup>th</sup> March 2013 in which 13 patients were operated on to address impairments of the hand and eye. As per protocol all the eligible patients were selected for surgery and were admitted to hospital for pre-operative physiotherapy 15 days prior to surgery.<sup>4</sup>

All patients remained in the hospital for post-operative physiotherapy after 3 weeks. As per the protocol of tendon transfer rehabilitation, one of the important components of the first week of post-operative rehabilitation is implementing isolation exercises<sup>5</sup> (although isolation exercises for the muscle which is selected as a donor are taught to patients pre-operatively).

If a patient cannot locate the muscle for the affected hand, then the same exercise is demonstrated to the patient on the other hand.<sup>6</sup>

The role of verbal commands and encouragement is described as a motivating factor in the literature; as such it maximises the voluntary effort in exercises and patient motivation to do the exercises.<sup>7</sup> As the patient has various pre-operative adaptations, which he or she uses for doing activities of daily living pre-operatively, the patient is encouraged post-operatively not to use the hand in the same manner as he or she was using it during the pre-operative period. During the initial session of the first week post-operatively, the verbal command of the therapist has an impact on the overall rehabilitation programme.<sup>8</sup>

It has been observed that for the most part, patients are comfortable with the procedure, they do the isolation exercises easily and also understand the expectation of the therapist. Some patients during the post-operative rehabilitation period, however, sometimes find it difficult to do the same pre-operative exercise. Many reasons can be given: pain, adhesions, fear on the part of the patient and other factors which make it difficult for the patient to perform the exercises. There are other occasions, however when it is seen that the patient is not able to follow post-operative exercises because of the lack of effective communication between the therapist and the patient.

Verbal commands by the therapist, and patient education have major roles to play during the post-operative regime.<sup>9</sup> It is important, therefore, that patients and therapists should be able to speak to one another and understand each other's language for effective therapy programmes. There is an issue: metropolitan medical institutions attract patients from various parts of the country and from neighbouring countries as well. As these patients are from different parts of India they speak different languages, and because of the problem in communication and understanding of language a common requirement is that an interpreter is required if effective rapport with the patients is to be developed.

During post-operative sessions it is very important that the patient should learn the isolation correctly. To achieve such an end, vocational command on the part of the therapist and patient's own motivation, play a major role.

A situation arose under the author's observation where there was no effective communication and rapport building between therapist and patient and the patient was not able to isolate the transferred tendon. On closer consideration it was clear that the problem was not due to pain or the adhesion of the soft tissues, but in understanding the desired movement to achieve the pre-operative isolation exercises. In order to overcome this problem a short audio-visual clip of 3 minute duration was shown to the patient. The pre-recorded video clip showed the exercise as undertaken by a patient who underwent Zancolli lasso procedure for claw hand correction. In the pre-recorded video clip the isolation exercise of the transferred tendon was easily appreciated.

The patient took an appreciative interest in watching the video. He was able to follow the exercises and began to do the exercises along with the demonstrator in the video. By the end of three sessions the patient was able to do the required isolation exercises.

## Conclusion

This short report suggests that verbal commands are important in teaching post-operative exercises after tendon transfers, and if language barriers are present between the therapist and the patient then audio-visual aids can be helpful in teaching post-operative exercises. Further

research is required to establish the efficacy of audio-visual aids in teaching post-operative exercises.

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