

Neck Cancer Rehabilitation - A Case Report

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Abstract: *Cancer survivors are known to suffer an extremely complex and diverse set of impairments. Researchers have suggested that majority of cancer survivors have such significant impairments which often go undetected and leads to disability. Shoulder disability and speech impairment has emerged as a common problem for head and neck cancer survivors. The objective of our case study was to determine the effectiveness of exercise therapy in promoting restorative as well as supportive rehabilitation in a neck cancer survivor. Rehabilitation is cost - effective and reduces both direct as well as indirect costs of health care that adds on to the economic burden of a cancer survivor thereby reduces his overall quality of life. The findings of our study do not contradict the proposition that exercise intervention is a must for treating disability that results due to disuse in cancer survivors. It also suggests that exercise intervention does improve the quality of life, though our study does not demonstrate any significant difference in the values yet it serves as a medium for promoting much needed mobility and reducing the resultant disability.*

Keywords: Disability, Impairment, Quality of Life, Exercise Therapy

1. Introduction

Cancer continues to be a leading health problem in India. The reported cancer incidence in India this year is estimated to be 19 - 20 lakhs. Head and neck cancers comprise the fifth most common cancer with the seventh highest mortality rate. With an increase in the incidence of cancer, there has also been an increase in the survival rate. Despite the prospect of successful curative treatment, many HNC survivors feel unprepared for the life that awaits them⁽¹⁾. Rehabilitation of cancer addresses physical impairments and progressive disablement at all stages of cancer diagnosis and treatment. Clinicians and cancer survivor peers have now begun to address the rehabilitation needs of patients during the survivorship, palliative and pre - rehabilitation phases of cancer but there is still a need for widespread community education to highlight the importance of rehabilitation in cancer care management. Reduced cervical range of motion, lymphedema, swallowing, mouth opening, shoulder and neck range restrictions are the few most common complications seen post - operatively /post - chemotherapy which if not addressed can lead to lifelong disability⁽²⁾. Our study highlights the role of rehabilitation during the post chemotherapy phase in a rehabilitant with neck cancer which if not provided can lead to lifelong disability which is not only a physical impairment but also mental impairment.

2. Case Report

A 65 - year old male reported to the oncology OPD two months ago with the complaint of difficulty in swallowing solid food and cough upon eating or drinking. CECT performed a year ago revealed Left Pyriform fossa mas with extension and characteristics, Left level 3 enlarged lymph node, and left tonsillar fossa cystic lesion. A PET - CT scan performed a month after the CECT revealed a hypermetabolic mass supraglottic larynx which was described as malignant. Further Direct Laryngoscopy with biopsy under MAC revealed moderate dysplasia.

He underwent chemotherapy where he received C2 D1 of Cisplatin 60 mg, he tolerated the procedure well and was stable. The patient post three weeks of last chemotherapy reported to our OPD with a complaint of right shoulder stiffness and pain upon elevation accompanied by extreme pain during neck extension. He also complained of heaviness in the chest while deep inhalation and mouth opening. Initial examination revealed weakness of right shoulder abductors, scapular stabilizers, neck extensors, tightness of Deep neck flexors, and Pectoralis Major and upper trapezius of both sides. The shoulder ranges for abduction, flexion, and lateral rotation were majorly restricted with minor limitations of internal rotation as well. Chest expansion was below the normal excursion values, speech clarity was also reduced. The treatment started with Maitland mobilization for shoulder ranges, Segmental Excursion, and Thoracic Expansion to improve chest mobility. Passive maneuvers like manual percussions were given over to clear the chest. Gentle stretches were given for Pectoralis major and neck flexors. Vowel exercises were given to improve speech specifically pronunciation. Tongue depressors were used to aid better mouth opening. Post ten days the patient was re - evaluated for ranges and strength which showed improvement in the ranges as well as improved strength of scapular stabilizers. There was no significant increase in the range of chest excursion but the feeling of heaviness was markedly reduced. To assess the overall quality of life of the patient post - chemotherapy EORTC questionnaire was used. The patient was counseled by the team's psychologist to boost his morale.



Figure 1: Assisted Mouth Opening



Figure 2: Vowel Exercises



Figure 3: Active Assisted Range of Motion for Shoulder Elevation



Figure 4: Active assisted range of motion for shoulder rotation

3. Discussion

The role of physical therapy in head and neck cancer has been undermined because of which the patients suffer from several deformities. Altered movement patterns like reduced scapulothoracic kinematics have been seen in breast cancer survivors ⁽³⁾. Head and neck cancer survivors have been shown to have both range and strength deficits. The basic aim of providing rehabilitation to cancer survivors is to not increase their lifespan but improve their quality of life ⁽⁴⁾. Several aspects of rehabilitation preventive, restorative, supportive and palliative exists, our study aims at restorative and supportive rehabilitation by the means of which maximum functional restoration for patients with impairments and disabilities can be addressed as well as self care skills, mobility, and effects of immobilization can be treated. The aim of providing exercises is to reduce or prevent shoulder load and increase the strength of the rotator cuff as well as other scapular stabilizers. The mobilization aims to facilitate early recovery of active range of motion to improve the quality of life. Studies recommend the need for educating oncologists as well as other physicians on the need for appropriate referral for rehabilitation in cancer patients ⁽⁵⁾. A systematic review of 27 studies identified the effect of swallowing as well as vowel exercises on jaw mobility in HNC survivors ⁽⁶⁾. The authors identify physical therapy as a crucial modality in the rehabilitative management of cancer-related disabilities. The role of exercise in oncologic rehabilitation programs has far been mostly limited to physical treatment addressing specific impairments caused, by disease or surgery. Moreover, recent studies have shown that physical activity may improve both the quality of life and mood and the physical performance of cancer patients during and after treatment ⁽⁷⁾.

4. Conclusion

The management of cancer can be Preventive, Restorative, Supportive as well as Palliative. Various treatment methods available leave the patients with some or the other form of physical disability. There is a dire need to identify the functional deficits and provide appropriate rehabilitation to ensure a better life ahead for cancer survivors. Many cancer survivors present with a vast array of possible signs and symptoms, this highlights the need for the intervention of a Multidisciplinary team. Though exercise prescription is an important component of rehabilitative care, it should only be provided after proper screening of the presented

Rehabilitation and oncology professionals must find ways to work together to provide optimal cancer rehabilitation services to the many patients who need them.

Conflict of Interests

We have no conflict of interest to declare.

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