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Case Report on Rom Exercises Effective in Reducing Pain and Discomfort in Hodgkin's Lymphoma

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Introduction: Hodgkin lymphoma, which also accounts up 11% of all lymphomas, is named Hodgkin's disease. This malignant disease is known as the Reed-Sternberg-cell, which is situated in lymph-nodes and is characterized by the proliferation of irregular gait. The disease occurs more often in those between 15-30 years and over 55 and is doubling prevalent in women, in men and women. The sickness is bimodal age specific. The frequency in India is around 1 in 25,000 inhabitants. However, for all stages, long-term survival is around 80%.
Clinical Findings: The onset of symptoms is usually insidious but usually used for frequent diagnosis are: Extension of lymph nodes in area of cervical, axillary or inguinal, extraordinary weight loss, Fatigue**,** Weakness, fever, chills, tachycardia, sweating or nocturnal sweat.
Diagnostic Evaluation: Peripheral analysis of the blood**,** Biopsy of Excision of lymph node**,** Examination of bone marrow**,** Radiological study
Therapeutic Management: Chemotherapy and radiation therapy or some may need immunotherapy or stem cell transplant.

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Outcome: After treatment, the child showed great improvement.
Conclusion: A 11 year male child was admitted to pediatric ward no.22 in AVBRH on 25/05/2021 with a unique case of Hodgkin's lymphoma with severe pain and discompfort. He was admitted in hospital and all investigation and treatment were started. After getting medical treatment and physiotherapy he shows great improvement and the treatment was still going on till my last date of care.

Keywords: Hodgkin's lymphoma; child (female); chemotherapy; radiotherapy; stem cell transplant.

1. INTRODUCTION

Hodgkin lymphoma, which also accounts up 11% of all lymphomas, is named Hodgkin's disease [1]. This malignant disease is known as the Reed-Sternberg-cell, which is situated in lymph-nodes and is characterized by the proliferation of irregular gait [2]. The disease occurs more often in those between 15-30 years and over 55 and is double prevalent in women, in men and women. The sickness is bio-modal age specific [3]. The frequency in India is around 1 in 25,000 inhabitants. However, for all stages, long-term survival is around 80% [4].

1.1 Patients Identification

A 11 year male child was admitted to pediatric ward no.22 in AVBRH on 25/05/2021 with a complaint of Left hip discomfort for 2 months. In the last 3 months, he has recorded heavy night sweats, mild temperature, pruritus rash and a roughly 15% weight loss. In the last month, also, he noticed a growing lump in his left hip.

1.1.1 Present medical history

A 11 year male child was admitted to pediatric ward no.22 in AVBRH on 25/05/2021 with a complaint of Left hip discomfort for 2 months. In the last 3 months, he has recorded heavy night sweats, mild temperature, pruritus rash and a roughly 15% weight loss. In the last month, also, he noticed a growing lump in her left hip. Also, he found an enlarging mass in his left hip during the latest month at presently he is well and is under observation with continuous medication.

1.1.2 Past medical history

The past medical history of my patient she have swelling on right side of neck, light pain. His ongoing general treatment in private hospital. He was admitted to hospital due to increase swelling. Till then, she was undergone on treatment in AVBRH Sawangi (M) Wardha.

1.1.3 Family history

There are 4 members in his family. All other members of the family were not having any complaints in their health. In his family no other member is having any problem of hypertension, diabetes or any other disease condition.

1.2 Past Investigation and Outcome

The past medical history of my patient he have swelling on right side of neck, light pain... His ongoing general treatment in private hospital. He was admitted to hospital due to increase swelling and fever. Till then, he was undergone on treatment in AVBRH Sawangi (M) Wardha.

1.3 Clinical Findings

Swelling in right side of neck and Left hip discomfort for 2 months. In the last 3 months, she has recorded heavy night sweats, mild temperature, pruritus rash and a roughly 15% weight loss. In the last month. In the last month, also, he noticed a growing lump in his left hip.

2. ETIOLOGY

Unknown is the exact etiologic agent of Hodgkin lymphoma. There is however an elevated risk of "Hodgkin's lymphoma" for the illness, autoimmune disorders and immunosuppression of Epstein-Barr (EBV). Family susceptibility to Hodgkin's lymphoma has also demonstrated. In the mixed cell and lymphocyte deficient subtypes of Hodgkin's lymphoma EBV has been reported to be more prevalent. The potential cause of EBV illness loss of the immune surveillance was postulated. No other virus played a significant role in pathogenesis of the illness. .The increased risk of developing Hodgkin lymphoma includes secondary immune suppression following strong organ or hematopoietic cell transplants, therapy with immunosuppressive medications, and human immunodeficiency (HIV). HIV patients usually have a high stage, atypical lymph nodes and bad prognostics.

Studies have revealed that HL growth in homosexual siblings in patients with Hodgkin lymphoma has been ten-fold, indicating a gene-environmental involvement in the susceptibility of Hodgkin's lymphoma.

2.1 Physical Examination

There is not much abnormality found in head to toe examination, the child is lean and thin and having dull look. He is weak and not so cooperative. Though it is found that the child is having swelling on right-side of neck.

2.2 Diagnostic Assessment

Blood test: Hb – 10.6 gm.%, Total RBC count – 3.87millions/cumm, RDW – 15.3%, HCT – 33.5%, Total WBC count – 6600/cumm, Monocytes – 08%, Granulocytes – 75%, Lymphocytes – 15%, AST(SGOT) – 46U/L. Peripheral Smear: RBCs –Normocytic, normonucliotic. Platelets – adequate on smear. No Haemoparasite seen.

2.3 Ultrasonography

No obvious retroperitoneal lymphadenopathy seen.

2.4 Therapeutic Intervention

Blood transfusion, Inj. Ceftriaxone 500mg IV x BD, Tab. Paracetamol 500mg x OD Inj. Neomol 100mg x BD, Inj. Pantop 40mg x OD. IVF - NS, RL.

3. EXERCISE PROGRAM FOR PAIN AND DISCOMFORT MANAGEMENT

3.1 Phases of Interventions

- Phase I - primary goal decrease fatigue, decrease risk of falling, and promote endurance. Intervention includes patient education of fatigue managment, falls risk assessment, general aerobic exercise including cycle ergometer, ambulation, cycling (monitoring cardiovascular /pulmonary response), and stretching to promote flexibility. Begin lymphedema treatment and educate patient on lymphedema managment at home. Include balance training and address falls risk due to any vestibular issues or other balance issues caused by cancer treatment.
- Phase 2 - Continue stretching, general aerobic exercise program, and lymphedema management at home; begin progressive resistance exercise (PRE) to improve strength and promote function. Include interventions to improve functional movement and promote correct movement patterns (gait training, squat training, posture, ADLs)
- Phase 3: Promote independence with ADL and all strength training and aerobic exercises.

3.2 Dosage and Parameters

Aerobic training: Begin with low impact aerobic traning (cycle ergometer, bicycle) progressing to ambulation over ground. Begin at 10 minutes per day and progress to 30 minutes a day, 3-4 times/week.

3.3 Strength and Resistance Training

Functional closed chain exercises (mini-squats, lunge matrix, stair training, etc.) for LE, resistance band/weight training for posture stabilizers and UE, increase core strength). Perform 8-12 reps of each exercise, 2-3 sets, to point of fatigue but not beyond that point. 20-30 minutes, 2-3 times per week and progress as tolerated.

3.4 Rationale for Progression

Progress patients to maintain/improve level of fitness during treatment and promote overall better quality of life.

4. DISCUSSION

A male child admitted in AVBRH on 25/05/2021 in pediatric ward no 15 with chief complaint of Swelling in right side of neck and Left hip discomfort for 2 months, history of night sweating, low grade fever, pruritus rash across the body, and weight loss of about 15% during the last three months. In the last month, he also detected a growing lump in her left hip. As soon as he was admitted to hospital investigations were done and appropriate treatment were started. After getting treatment, he shows great improvement and the treatment was still going on till my last date of care.

In a study published "On a malignant appearance of the absorbing glands and spleen" Thomas Hodgkin gave the earliest description of

“Hodgkin's lymphoma” in 1832 Four, fifth. The name "Hodgkin's disease" was created by Samuel Wilk in 1856 [5]. 6. Epstein Barr Classical Virus Association In developmental children with a frequency of 91 to 98 per cent, Hodgkin's lymphoma is prevalent [6]. About 4.5% of patients are susceptible to hereditary disease. Of course, in humans infected by immunodeficiency viruses, there is a 10-fold increase in the incidence of classical lymphoma of Hodgkin. It may be linked to autoimmune disorders and can develop lymphoma of Non-Hodgkin [7].

Neoplastic cells make up less than 1% in the lymph node of Hodgkin's lymphoma. While cells of similar phenotypes but of various morphologies are widespread, classic reed-sternberg cells are rather unusual, as are Hodgkin/Reed-Sternberg cells [8]. Immunophenotypic investigations reveal that B cells in the germ center of the lymph node are generated from (CD15); positive (CD30) cells. The etiology of Hodgkin lymphoma is significant for interaction between Hodgkin/Reed-Sternberg cells and the surrounding inflammatory cells [9].

Pediatric Occurrence of Hodgkin's cervical lymphatic lymphoma is usually unilateral, painless. The main site is subdiaphgrammatic6 in 3 percent of the cases. Those that are mediastinal with chronic toxicity [10]. Rarely, an axillary or inguinal node may occur with splenomegaly; 4. 'B' symptoms include a fever above 38°C, nocturnal sweat drenching and unclear loss of body weight more than 10 percent in the last six months in roughly 50 percent of developing country youngsters [11].

According to Goodman and Fuller, “At the present time, standard protocols do not exist for problems associated with cancer and cancer treatments encountered by the physical therapist.” However, due to the side effects of cancer including cognitive impairments and post-surgical problems including limited ROM, soreness, disuse, pain, sensory loss, weakness, DVT, and lymphedema, the physical therapist can play a huge role in maintaining a cancer patient’s functional abilities and quality of life [12].

Furthermore, emerging research suggests that physical exercise works to increase physical activity, improve general self-efficacy and mastery, decrease fatigue and distress, and leads to an increased quality of life in patients who complete cancer treatments. This research also demonstrated a direct correlation between physical activity and quality of life [13].

5. CONCLUSION

The prognosis and increasing prevalence in developing countries of juvenile Hodgkin lymphoma appear to be worse and general professional should be conscious of early clinical events. In order to identify Hodgkin's lymphoma early, there is a high suspicion index, as many youngsters are in severe stages. The extent of illness is defined by Radiological Studies. In the early evaluation of a kid with “Hodgkin's lymphoma” with his to-pathological exam, fine needle-aspiration plays the crucial function of providing a definite immune-supplemented diagnosis. Client was treated with blood transfusion, physiotherapy and further planning was done for chemotherapy after consultation with oncotherapist. The scale of the condition helps stratify risks and determine drug treatment options. My patient show great improvement after getting the treatment and the treatment was still going on till my last date of care. Physiotherapy helped in management of pain.

CONSENT

As the client is minor, parental consent was obtained from mother and father and preserved with author before submitting the manuscript for publication**.**

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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