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Hodgkin And Non-Hodgkin Lymphoma: A Case Study

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Abstract:
Lymphomas are the distinct entities in the world of oncology. It varies with the degree of malignancy. Lymphoma starts in the body's lymph system or lymphatic system. It is of two type: Hodgkin Lymphomas and Non-Hodgkin Lymphomas. The sign and symptoms of the disease includes fever, chills, night sweats and loss of appetite. Although systematic chemotherapy with or without radiation, has significantly improved the prognosis of the majority of the patient with the disease, and also with the introduction of gene expression profiling, immunotherapy, especially has led to the discovery of novel oncogenic pathways involved in the process of malignant transformation. The present review summarizes the progress made in the advance treatment to treat Hodgkin and Non-Hodgkin Lymphomas along with nursing intervention to subside the symptoms which have markedly improve the client's conditions.

Keywords:*Hodgkin's Lymphoma, Non-Hodgkin's Lymphoma, Novel oncogenic Pathways, Immunotherapy.*

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I. Introduction

The malignant lymphomas constitute a group of neoplasms, of varying degrees of malignancy, derived from the basic cells of lymphoid tissue, the lymphocyte, and histiocytic in any of their developmental stages.

The lymphatic system is part of the body's germ-fighting and disease-fighting immune system. The lymphatic system includes lymph nodes. They are found throughout the body. Most lymph nodes are in the abdomen, groin, pelvis, chest, underarms and neck.

Hodgkin lymphoma is a type of cancer that affects the lymphatic system. Hodgkin lymphoma begins when healthy cells in the lymphatic system change and grow out of control.

The lymphatic system also includes the spleen, thymus, tonsils and bone marrow. Hodgkin lymphoma can affect all these areas and other organs in the body.

Hodgkin lymphoma, which used to be called Hodgkin disease, is one of two broad types of lymphoma. The other is non-Hodgkin lymphoma.Advances in diagnosis and treatment of Hodgkin lymphoma have helped give people with this disease the chance for a full recovery.

Signs and Symptoms

In some tumours, morphology is paramount, and in others, it is immunophenotype, a specific genetic abnormality, or clinical features. An international study of 1300 patients, supported by the San Salvatore Foundation, was conducted to determine whether the R.E.A.L. Classification could be used by expert pathologists and had clinical relevance. Since 1995, the European Association of Pathologists (EAHP) and the Society for Hematopathology (SH) have been developing a new World Health Organization (WHO) Classification of hematologic malignancies, using an updated R.E.A.L. Classification for lymphomas and applying the principles of the REAL. The International Lymphoma Study showed that the R.E.A.L Classification could be used by pathologists, with inter-observer reproducibility better than for other classifications (>85%).

Immunophenotyping was helpful in some diagnoses, but not required for many others. Based on experience with the REAL classification for several years and on input from the committees, several changes were proposed for the WHO version. These included some changes in nomenclature, splitting some categories

that were believed to be heterogeneous, and adopting some "provisional entities" as real "Signs and symptoms" of Hodgkin lymphoma may include:

a) Painless swelling of lymph nodes in the neck, armpits or groin.
b) Fever.
c) Feeling very tired.
d) Night sweats.
e) Weight loss that happens without trying.
f) Itchy skin.

Recent Advancement

Recent advances in molecular genetics have significantly deepened our understanding of the biology of these diseases. The introduction of gene expression profiling, especially has led to the discovery of novel oncogenic pathways involved in the process of malignant transformation. Equally important, these analyses have identified novel molecular lymphoma subtypes that are histologically indistinguishable. There is a significant distinction in the clinical course of germinal centre B-cell-like, diffuse large B-cell lymphoma (DLBCL), and activated B-cell-like DLBCL, as they have a huge variation in the survival rates after standard treatment.

II. Case Report

A 77-year-old Indian female patient reported to the hospital as a referred case with the chief complaints of Fever, Swelling over neck region, Pain in lower limb, Urgency of urine, Severe weight loss, Constipation, Fatigue, Palpitation and Depressivelike symptomssince 2-3 months.

She was a known case of Type 2 Diabetes Mellitus (DM) since 8 years and Hypertension (HTN) since 4 years. She was on medication Tab Gluconorm G1, Injection Human Insulin Regular (HIR)(according to the sliding scale) and Tab Amlodipine. She also had a history of Coronary Artery Disease (CAD)for which she has done her stent placement 9 years ago. Family history was non-contributory. On admission hervitals were unstable. She had fever with chills and decreased SPO_2. A series of radiological and routine haematological investigations were performed like hemogram analysis, urine analysis, and X-ray chest which were found normal. The patient was negative for HIV and hepatitis B virus.Her haemoglobin (Hb) level and platelets were low i.e 7.9 g/dl and 105 $10^3/\mu L$. On her (Differential Leukocyte Count) DLC report, neutrophil count was 89.6 g/dl and lymphocytes was 3.8g/dl. Based on the history and clinical findings, doctors were suggesting it as a case of Hodgkin and Non-Hodgkin lymphoma. Biopsy of the lympnodes from supraclavicular region was performed and the sample was sent outside for further investigations and confirmation of the diagnosis.

Treatment was started with chemotherapeutic drugs like vincristine 2 mg intravenously, cyclosporine 750 mg with 250 ml of Ns over one (1) hour and injection Rituxem 500 mg with 500 ml NS over 4 hours. She has also received 1 unit of packed red blood cell (PRBC) in view of anaemia and 4 units of platelets for thrombocytopenia.

During the course of hospitalization, conservative management was done. Patient was catheterized and kept on nasal prongs for maintaining oxygen saturation. Tepid sponging was done for chills fever. She also had a history of fall two days before admission for which she was bedridden although her skin was intact and there was no sign of adult pressure ulcers.She was improving clinically and was advised for G2 cycle of chemotherapy from Onco-day Care.

Nursing interventions

1) Ineffective breathing patternrelated to fatigue secondary to muscles weakness as evidenced by low SPO_2.

- Assessing the breathing pattern.
- Monitoring rate, rhythm, depth of respiration and SPO_2.
- Auscultating lungs for breath sounds.
- Providing semi fowlers position to the patient.
- Administering oxygen through nasal prongs.
- Providing adequate rest and avoid physical exertion.

2) Acute pain in lower limb related to fall as evidenced by patient verbalization.

- Assessing the pain location, intensity and severity.
- Monitoring vital signs of the patient.
- Monitoring pain level through visual analog scale.
- Providing comfortable position to the patient.
- Providing comfort devices like- pillow, log rolls to the patient.

- Providing calm, comfort and dim environment.

3) Impaired physical mobility related to pain as evidenced by assistance required to perform activities of daily living.
- Assessing muscles power,pain location, intensity and severity.
- Assessing the patient ability to perform activities and the demands of daily living.
- Providing assistance and keep necessary items nearby patient reach.
- Teaching passive range of motion exercises and encouraging ambulation.
- Providing schedule of daily activity and restand advised for changing positions frequently.
- Providing protective environment like- side rails, bed locks, call bell, etc.

4) Elder frailty syndrome related to fear of falling as evidenced by patient verbalization.
- Assessing risk factors for fall.
- Assessing muscles strength.
- Maintaining healthy nutritional status and hydration.
- Providing protective environment like- side rails, call bell and good lightening.
- Educating patient and family member about adherence towards treatment and follow up.
- Educating family member to provide assistance while walking.

5) Decreased self-careability syndrome (Bathing, Dressing, Feeding and Toileting) related to immobility secondary to weakness as evidenced by poor hygiene.
- Establishing rapport and maintaining a supportive firm attitude.
- Assessing abilities and level of deficit.
- Using strategies to promote independent feeding, such as cutting food in small pieces and using sippy cup for fluids.
- Providing oral care and fixing the patient's clothes.
- Changing position every 2 hourly and providing back massage.
- Demonstrating various techniques and lifestyle changes to meet self-care needs.

6) Inadequate health knowledge related to newly diagnosed disease condition as evidenced by questioning.
- Assessing the previous knowledge about diseased condition.
- Assessing the patient and her family member abilities to learn about disease condition.
- Educating patient and her family member about disease condition, its causes sign and symptoms and its treatment.
- Educating the importance of compliance to the treatment.
- Clarifying the doubts of patient and family members.
- Providing positive reinforcement and information about additional learning resources.

7) Risk for infection related to compromised host defence secondary to immunosuppressive therapy.
- Assessing the patient for sign and symptoms of infection including fever, redness, oedema, pain, purulent discharge from catheter (indwelling catheter).
- Monitoring white blood cells (WBC) count, urine culture and urine routine along with kidney function test (KFT).
- Performing hand hygiene and follow barrier nursingbefore contacting the patient.
- Maintaining strict aseptic technique.
- Monitoring vital signs and colour of urine.
- Monitoring strict urine output of the patient.

III. Conclusion

Hodgkin and Non Hodgkin lymphoma is common disease but it is very rare that same person will get the disease. An aggressive treatment need to be considered. Despite prolonged ventilation through oxygen, a full pulmonary recovery is possible and disease remission is achievableallowing future kidney transplant.The above case report has enhanced the knowledge and skills in providing priority based comprehensive nursing care. This report alsoattempts to correlate the clinical presentation and histological importance of the disease. Thus the knowledge is essential to act promptly in identifying and treating the disease.

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Conflict Of Interest

The author declares that there is no conflict of interest.

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