

# Case Report on Acute Lymphatic Leukemia

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## Abstract

**Background:** Leukemia are the most common cancer in children, the malignant neoplasms are the cancer of the blood or bone marrow produce blood cells. Leukemia can happens when there is a problem with the production of blood cells. About 30 to 40 percentage of childhood malignancies include leukemia. There is higher proportion of T- cells. Linkage. Acute lymphocytic leukemia ALL.

**Case Presentation:** The female patient 6yr old who was apparently admitted in AVBRH on date 16/09/2019. Patient has fever since 1 month of continuous fever spike with high grade fever, swelling over neck since one month and pain in the leg. Patient was diagnosed with Acute lymphatic leukemia one year back, was brought here with complaint of one complaint of one month of continuous fever, they checked for the complaint in two hospitals of Yawatmal, they referred to AVBRH for further management.

**Investigations:** Complete blood count, history and physical examination, complete blood count and differential count, peripheral smear examination and platelets count, bone marrow aspiration and Patient doesn't have surgical history. Patient was treated with tab prednisolone, Induction therapy, chemotherapy Nursing management: patient care was given according to patient complaint, Keep patient safe from falls at risk of weakness or paralysis. Provide pain management, protection from infection, check lab reports,

**Conclusion:** Patient was admitted to hospital for further treatment of acute lymphatic leukemia and he was admitted in AVBRH and got treatment and now the patient condition is satisfactory.

**Keywords:** Acutelymphatic leukemia, ALL.

## Introduction

Leukemia are the most common cancer in children, the malignant neoplasma are the cancer of the blood or bone marrow produce blood cells. Leukemia can happens when there is a problem with the production of blood cells. Leukemia is one of the blood cancers which affect WBC of body. WBC are they playing a major role in our body like they acts as fighting mechanism and help the body from harmful foreign bodies.<sup>1</sup>

But in case of leukemia there will be the fighting mechanism are disturbed because the white blood cells it changes their ability to fight with infection and it changes into cancerous cells form in spongy tissues and bones.<sup>2</sup>

**Incidence:** About 30 to 40 percentage of childhood malignancies include leukemia. There is higher proportion of T- cells. Linkage.<sup>3</sup> Acutelymphatic Leukemia in children aged between 0 to 4 year with 7.55 and 3.32 cases per 100,000 patients in year for male and female child respectively<sup>4,5</sup>.

## Objective:

- To know general idea regarding disease condition
- To explore knowledge regarding surgical, medical and nursing management.

**Present history:** The female patient 6yr old who was admitted in AVBRH on date 16/09/2019 and she is known case of Acute lymphatic leukemia. Patient had

fever since 1 month of continuous fever spike with high grade fever, swelling over neck since one month and pain in the leg.

Past history: Patient was diagnosed with Acute lymphatic leukemia one year back, was brought here with complaint of one complaint of one month of continuous fever, they checked for the complaint in two hospitals of Yawatmal, they referred to AVBRH for further management

### Birth History

#### Pre-Natal History

Nature of pregnancy- Normal

Nature of marriage – non consanguineous

History of drug and tobacco- Not present

Exposure to radiation-Not present

Tetanus toxoid vaccines - taken

#### Natal history

Type of delivery- normal vaginal delivery

Place of delivery- Home delivery

Birth Weight- 3kg

**Post Natal History:** A newborn baby born immediately and healthy. There was no complication and infection in both the child and the mother

**Surgical history:** There is no surgical management of acute lymphatic leukemia. In my patient doesn't have surgical history

**Clinical findings:** Fever, generalized body pain and headache was present

#### Investigations

Blood tests

- Total WBC Count was increased 11330/cu.mm
- Platelet count 0.25 lac/cm decreased
- Total RBC count 2.18 million decreased

#### Physical examination

Temperature-100 0 C

Pulse – 86beats/min

Respiration Rate – 22breaths/min

**Bone marrow aspiration:** Use to detect leukemia

and the responses of treatment, reports not available

**Management:** Multidisciplinary health care team are involved in care of patient with Acute lymphatic leukemia

#### Patient complaints like:

- Pain in upper and lower limb
- Swelling
- Fever
- Headache
- Generalized body ache

**The Treatment for Acute lymphatic leukemia patients is divided into four stages:**

**Induction Therapy:** The goal of this phase is to eradicate leukemia such that at the end of this phase is L5 percentage leukemia blasts in the bone induction therapy with the regimen marrow induction therapy with the regimen

**Chemotherapy:** The aim of the chemotherapy to eradicate the malignant cell and restore the normal bonemarrow function

**Maintenance Therapy:** It is given for 2.5 to 3 yr with mercaptopurine and MTY method of upper recommended dose

**Reinforcement therapy:** It is provided to vincristine and prednisone every four week

**CNS Prophylaxis:** In case of CNS involvement triple therapy i.e. Methotrexate, hydrocortisone cytosine are administered once a week during induction and every 8 week for 2 yr

#### Supportive and symptomatic management

To prevent the complication like

- Infection
- Bleeding
- Anemia
- Pain

**Intravenous Antibiotic therapy blood and platelets transfusion, bone marrow transplantation**

- Multidisciplinary health care team
- Pediatrician

### Prescription of medications

Tab. Prednisolone -40 mg- once in a day orally

Syrup Gelusil – 5ml/TDS

### Nurses Responsibility

- Monitored vital signs closely
- Assessed the condition of patient location, onset and severity of pain
- Evaluate the therapy responses
- Monitored the weight of the patient
- Assessed motor strength
- Checked lab reports
- The platelets counts are low child was observed for hemorrhage
- Maintained oral hygiene
- Observed the episodes of convulsions
- Assessed in bone marrow aspiration
- Assessed radiation therapy

### Dietician:

- Provide balanced meal
- Low fat dairy products they prescribe the patient
- Protein rich food
- Whole grains and legumes

### Discussion

Case of female patient 6yr old who was apparently admitted in AVBRH on date 16/09/2019. Patient has fever since 1 month of continuous fever spike with high grade fever, swelling over neck since one month and pain in the leg . Patient was diagnosed with Acute lymphatic leukemia one year back, was brought here with complaint of one complaint of one month of continuous fever,they checked for the complaint in two hospitals of Yawatmal, they referred to AVBRH for further management there clinical signs of patient is fever, generalized body pain and headache was present undergone the diagnostic evaluation are complete blood count, history and physical examination, complete blood count and differential count, peripheral smear examination and platelets count, bone marrow aspiration . Patient doesn't have no present surgical history. Patient was treated with tab prednisolone, Induction therapy,chemotherapy Nursing

management for acute lymphatic leukemia Monitor vital signs closely, Keep patient safe from falls at risk of weakness or paralysis. Provide pain management, protection from infection,check lab reports, observed the side effects of chemotherapy drugs, maintained oral hygiene, observed for convulsions, associated with bone marrow aspiration. Patient was admitted to hospital for further treatment of acute lymphatic leukemia and she was admitted in AVBRH and got treatment and now the patient condition is satisfactory.

The condition of patient was improved after giving the care by various multidisciplinary health care team and supportive management . Pain is slightly reduced as per evidence by patient verbalization, patients nutritional pattern is improved as per evidenced by her health condition.

The patient as reduced the swelling, pain over leg and fever was reduced as giving all the management the symptoms of the patient reduced as verbalize by the patient and their parents. Now the patient condition is satisfactory.

A study by Deshpande et al reflects on biomarkers of human cancers 6. Khatib et al have focused on therapeutic options for cachexia in cancer patients.

### Conclusions

If we provide proper care with the help of various multidisciplinary health team and there supportive management,it helps to improve the condition of the patient .Now the patient is conscious, alert improved his condition

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**Conflict of Interest:** Nil.

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