HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM

A PATIENT/FAMILY CENTERED CARE STUDY ON

SICKLE CELL DISEASE

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A PATIENT/FAMILY CENTERED CARE STUDY SUBMITTED TO THE NURSING AND MIDWIFERY COUNCIL OF GHANA IN PARTIAL FULFILLMENT TOWARDS THE REQUIREMENT OF THE AWARD OF A LICENCE TO PRACTICE AS A REGISTERED GENERAL NURSE.

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PREFACE

Modern science has charged to a comprehensive and individual nursing care of patient by means of employing new techniques in the professional nursing.

It plays a unique role in the health sector in that, it demands a blend of sensitivity care commitment and skills base on knowledge and in its application.

Nursing started with the use of traditional medicine and other practices which were not guided or proved by theories or technology. The above trend of nursing was practiced by many great legends in nursing which include Florence Nightingale and Virginia Henderson.

But currently, it is ensured that clients are nursed with a system in which theoretically and technologically based care are adopted. Hence, care study is adopted in a sense that clients are nursed using the nursing process which comprises of assessment, diagnosis, planning, implementation and evaluation as a criteria and principle in nursing.

Patient and family care study involves the collection of data from patient by using the problem solving approach to find out patients' problems, the causes of the problems and to render a comprehensive and competent nursing care to the patient using the nursing process approach. It involves detailed written account of the holistic nursing care rendered to the patient and her family. It also involves and creates a good professional but cordial relationship between the patient, family community, and the health team.

The patient/family care study forms part of the assessment of every final year student. It is a prerequisite for every candidate in order to partially fulfill the award of diploma certificate in Registered General Nursing by the Nursing and Midwifery Council of Ghana. It affords the student the opportunity to develop his/her skills for future use. The patient/family care study is a comprehensive account of the comprehensive and competent nursing care rendered to the

patient and family from the day of admission through the day of discharge, review and follow up visits.

The confidentiality of the patient and family were ensured by the use of patient/family initials instead of their full names.

The comprehensive care rendered was made possible by the employment of skills and knowledge in such disciplines as psychology, public health nursing, medical nursing, surgical nursing, pharmacology and nutrition and dietetics to meet the patient/family's needs and the community at large.

ACKNOWLEDGEMENT

My greatest gratitude goes to the Almighty God for His strength, wisdom, knowledge, guidance, protection and abundance grace granted to me.

I wish to state my profound appreciation to the Patient and her family for their patience, support, co-operation and consent for allowing me to use them as my patient and family for this study.

I would also like to express my deepest gratitude to Mr. Samuel Osafo Asare my supervisor for his guidance, corrections and the time he spent making this study became reality.

Again, appreciation goes to the medical director, nursing administrator, the preceptor, the nurse in-charges and staffs of the Accident and Emergency Unit and Female medical ward in Kwame Danso District Hospital who also gave me their support, and guidance during the study.

I would like to express my deepest gratitude to the staff of Holy Family Nursing and Midwifery Training College Berekum for their support during study.

I also express my profound gratitude to the Auditors and Publishers whose work I selected to making this script.

Again I also express my appreciation to my roommates who supported in the course of the work, especially Takyiwaa Emelia Basowaa and Anane Frimpomaa Vida and to my entire family especially my father Mr. K.S.O. Dannyansah for his unconditional financial and emotional support they granted me. May the Good Lord bless them all and grant them their heart desires.

INTRODUCTION

Patient care study is an academic exercise carried out by a final year student nurse.

The care study uses the nursing process approach which is deliberate activity whereby the practice of nursing is performed in systematic manner. The nursing process has five components. These are assessment, analysis, planning, implementation and evaluation. Using the nursing process in the nursing care of the patient emphasis is placed on health promotion, maintenance and restoration of health or even enhancing a peaceful death depending on the patient's condition.

The patient/family care study forms part of the requirements of the Nursing and Midwifery Council in fulfillment of the award of Registered General Nurses' Certificate (Diploma).

This study was carried out on the patient, a 20 year old girl admitted to the ward of Kwame Danso District Hospital, on the 12th of November, 2022 at 11:00pm, client was supported into the emergency Ward on account of severe leg pain, chest pain, waist pain, difficulty in walking and also difficulty in sleeping, headache and loss of appetite. She was accompanied by her parent and her sister. They were welcomed to the ward and client was immediately put into an admission bed and made comfortable after she was reassured that adequate measures would be put in place to help manage her condition and restore her health status. During admission, client was conscious and alert. Good therapeutic relationship was established between client, relatives and staff at the ward. Client appeared weak, but not dehydrated, and no sign of jaundiced noticed.

I made them aware of my desire to take the Patient and her Family as the patient/ family for a care study to enable me render to her individualized comprehensive nursing care until she is discharged home and even follow her after discharge for some time until she has fully recovered. During the period of hospitalization, patient was put on the following medication;

1. Injection Diclofenac 75mg stat, then 75mg prn X 48hrs.

2. Intravenous Normal saline, 1.5 litres daily X 3days
3. Intravenous Cefuroxime 750mg tds X 24hrs
4. Tablet Diclofenac 50mg bd X 5 days
5. Tablet Folic acid 5mg daily X 30 days
6. Tablet Diazepam 10mg note prn X 5 days

During the period of hospitalization, patient was nursed for five (5) days. Three (3) home visits were made during the period of interaction with my patient. My first home visit was made on 15thNovember 2022and my second on the 19th of November 2022 and last home visit was also made on 26th of November 2022. The nursing process was the tool adopted to determine the patient/family needs and problems for the appropriate nursing interventions to be carried out. At the time of discharge, her condition had tremendously improved. The interaction lasted for twenty (21) days that is until care was terminated on the 26^{tt}November 2022.

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CHAPTER ONE

ASSESSMENT OF PATIENT AND FAMILY

1.0 Introduction

Assessment is the first step of nursing process. It involves the collection of biographical data from the patient him/herself or from his/her folder to help identify patients and family well and also using the history and present information identify health problems based on the patient's condition.

Assessment is done to identify the patient`s health status and concerns to help in the diagnosis and also enable and enhance efficient nursing care methods used for the collection of data includes observation, interviews, history taking, literature reviews, information from patient folder, relatives and from medical staff.

1.1 Patient's Particulars

Patient`s particulars are the information in details about someone, according to the Macmillan English Dictionary (2017). They include patient's name, age, weight, height, patient's parent's name and others. The patient for the study is I. B. a 20 year old girl, born to Mr. and Mrs. E. A. on the 2nd of November, 2002. She comes from Atebubu at Bono East region but currently, staying at Kwame Danso. She is about 1.5 meters tall and weighs 55 kilograms. I. B. is dark in complexion. She is the first born of her parents. She lives with her parents in the same house. Patient had his primary and junior high school education at Kwame Danso and had her senior high school education in Sunyani senior high school (Susec). She communicates in Asante Twi and English, she is 'Bono' by tribe. She prefers ` waakye and shito' any other food. She is a Christian and attends Church of Christ at Kwame Danso. Her father Mr.E.A. is her next of kin.

1.2 Family's Medical History

This includes history about patient's family medical records. Whether there are known family hereditary diseases or not. It also involves how they get support for medical care. During interactions with the parents of the patient and patient herself, I got to know that both parents were Genotype AS (sickle cell traits) and patient is also a known sickle cell disease patient. According to parents of the patient, the only known diseases in the family is Hypertension, beside this, there are no known chronic diseases such as Diabetes mellitus, Epilepsy, and mental disorder in their family.

However, the family members may occasionally suffer from common ailments such as headache, malaria and abdominal pains which are treated on Out-Patient Department (OPD) bases, and sometimes visit nearby pharmacy shop for treatment.

1.3 Family Socio-Economic History

It is a brief record about patient's family occupation and source of income. (Hellmich, 2018) Patient`s family members are all Christians, the parents attend Church of Christ. The extended family member of patient`s are predominantly farmers. Her mother is a teacher by profession. Her father on the other hand engages in carpentry work. He is the bread winner of the house. He is supported by his wife, with the money she gets from her monthly payment. They earn enough money within the year. Their income is used in settling the family's bills such as up keeping of the family, school fees and other bills. This enable them amass enough income for the upkeep of the home, medical expenses, pay electricity and water bills and for emergency situations. Patient's family therefore belongs to the middle class income group. Her parents are able to cater for her needs and that of her siblings.

Patient is catered for by her parent because she cannot work at her age and still a student. In fact. According to the mother there is a great harmony among patient and her family members as well as the children in the community.

1.4 Patient's Developmental History

Growth is the gradual increase in the size of the body and its organs (Tailor, 2019). Development is the biological and psychological changes that occur in human beings between birth and the end of adolescence, as the individual progresses from dependency to increasing autonomy (Tailor, 2019).

Maturation is the change in the function of an organism, starting from the molecular level and involves various organs, both metabolically and physically-changing gradually from a simple to a more complex level (Tailor, 2019).

According to patient, her parents told her there was no problem with her conception through to birth. She was delivered at full term at spontaneous vaginal delivery and weighed as a normal child. There were no congenital abnormalities. Patient was immunized against all the six killer diseases such as Poliomyelitis, Diphtheria, whooping cough, yellow fever, measles, and tetanus. She has the BCG mark on the right shoulder. According to patient, her parents told her she was exclusively breastfed for only 2 months and later supplementary food such as porridges was introduced alongside with breast milk. She started having secondary characteristics such as pubic hair, breaking of voice, developing of hips and increase in breast size at the age of 12 years. The information given by client revealed that she went through a normal developmental milestone without any complications. Patient could sit at six months, patient started crawling at eight months and could walk at one year and could eat all meals prepared at home. Patient was weaned at one and half years of age. Patient could talk at two years and could play with other children.

Erikson's theory of psychosocial development in 1964 describes the human life cycle as a series of eight ego developmental stage from birth to death. The theory focuses on psychological task that are accomplished throughout the life cycle. Patient falls under stage four (4), which is industry versus inferiority (6 to 12 years). Industry versus inferiority (6 to

12 years); through social interactions children begin to develop a sense of pride in their accomplishments and abilities. If children are encouraged to make and do things and are praised for their accomplishment they begin to demonstrate industry by being diligent, preserving at task until completed and putting work before pleasure. If instead child is ridiculed or punished for their efforts or if they are found incapable of meeting the expectations of their parents and teachers they develop feelings of inferiority. Am convince that patient is under the industry stage because she always want to be diligent, accomplish task and putting work before pleasure so that she can be praised and explore more things that are within her.

1.5 Patient's Lifestyle and Hobbies

This talk about the regular activities that patient does for enjoyment, typically during her leisure time. Lifestyle is the interest, opinions, behaviors and behavior orientations of an individual, group, or culture. (Merriam-Webster, 2019)

According to patient, after her completion of her Senior High School education, she normally stays at home. She wakes up around 6:30am in the morning and brushes her teeth, empties her bowel and takes her bath. She makes sure house chores assigned to her are completed. Patient is not selective with regard to food. She takes any food but likes`waakye and shito stew' very much especially when it is warm. patient enjoys reading story books, watching television and listening to any kind of music.

1.6 Patient's Past Medical History

It involves patient's health status prior to the presenting problems she brought to the hospital. According to patient's mother, patient did not suffer from any of the childhood illness, like measles, whooping cough and other diseases but occasionally experiences minor ailments such as fever, headache and cold which they treat using medications bought from a pharmacy shop and also herbal medicine but when symptoms persist or become worse, she is taken to a nearby

hospital. Patient was diagnosed of sickle cell disease at the age of 6years and has been on admission at Komfo Anokye Teaching Hospital for several times, thus in 2008, 2009, 2010,and 2011. She has however stopped taking her routine drugs such as Folic acid, vitamin B-complex and Fersolate, because she thought she can live a normal live without her drugs.

1.7 Patient's Present Medical/Surgical History

This involves patient actual problem that prompted her to come to the hospital.

Patient, who is a known sickle cell disease patient with Genotype SS, was in her usual state of health until the sudden onset of general body pain especially at the waist and back with chills, abdominal and joint pains around 10:00pm on the 11thNovember, 2022. She took in 1g of Paracetamol for the pain to subside but the pain resurfaced after a short relieve. She later resulted to the use of medical ointment to rub her body, her back and waist but the pain did not subside, so her parents and sister brought her to Kwame Danso District Hospital for intervention and was detained at the Emergency Ward with the diagnosis of sickle cell disease with vaso occlusive crisis around 11pm and later transferred to the Female Medical ward.

1.8 Admission of the Patient

Admission of a patient is defined as when an illness or injury requires an immediate health care malaria (Hornby, 2019). Admission can be scheduled (planned) or unscheduled (emergency). The type of admission for Miss I.B. was a planned admission.

On the 12th of November, 2022 at 11:00am, Miss I.B. arrived on the Female Medical ward per ambulation. She was accompanied by a staff nurse, a rotational nurse, and her parents. They were warmly welcomed to the ward and offered seats. On arrival, patient was completely alert and conscious. Patient had been detained at the emergency unit since yesterday with the diagnosis of vaso occlusive crisis in a known Sickle Cell. The accompanying staff nurse gave me the patient's information. To validate her admission to the Female Ward, her folder number

was input into the hospital's computer system. By mentioning the patient's name and waiting for her to answer, the patient's identity was confirmed. She was made comfortable in an admission bed. Name, sex, age, and home address were all recorded in the admission and discharge book, as well as the daily ward state. Vital signs were checked and recorded accurately as follows:

1. Temperature 39.0^{o}C
2. Pulse 92 bpm
3. Respiration 22 cpm
4. Blood Pressure 121/77mm/Hg
5. Weight 55kg

Physical examination on the patient was performed from head to toe. At the time of admission, Assessment revealed that patient had severe joint pains, high body temperature and general body weakness.

Due to the high body temperature, patient was asked to remove extra clothing, she was given cold drinks, sponged with tepid water and prescribed Intramuscular Diclofenac 75mg stat was given.

Patient and relatives looked anxious. They were reassured to put their thoughts and anxieties to rest. The patient was introduced to the other patients as well as the staff members present, and she was assured of quality healthcare. The hospital's policies on visiting hours and bill payment were discussed. The patient’s parents were given a thorough orientation to the ward.

The following treatment plan were ordered:

1. Injection Diclofenac 75mg start, then 75mg Prn × 48 hours
2. Intravenous Normal saline 500mls × 3 days
3. Intravenous Cefuroxime 750mg tds × 24 hours
4. Tablet Diclofenac 50mg bd × 5 days

5. Tablet Folic acid 5mg daily X 30 days
6. Tablet Fersolate 100mg daily × 30 days

Patient had the following laboratory investigations ordered:

1. Blood for malaria parasites
2. Blood for grouping and cross-matching
3. Full blood count
4. Blood for haemoglobin electrophoresis

I introduced myself to the patient as a final-year nursing student at Holy Family Nursing and Midwifery Training College, Berekum who wanted to take her and her family for my care study. Miss I.B. and her family were told that the care study is a requirement for the award of a Diploma in Registered General Nursing by the Nursing and Midwifery Council of Ghana. I explained to them that at least three official home visits will be made, after clearly explaining that every information obtained will be treated with the outmost confidentiality, I asked for permission to use her and her family for the study and they agreed. Discharge planning was initiated with the relatives thus they will continue the care at home once she is well. Patient was given a brief education on why she was manifesting the sign and symptoms associated with her condition and what she should expect from the medical team as part of her treatment regimen and was also assured of competent nursing care. I selected Miss I.B. because I wanted to know more about sickle cell disease.

1.9 Patient's Concept of Illness

Patient knows that the disease is a genetic disorder found in the blood of both parents that was transmitted to her. She also has some knowledge about the causes of sickle cell crisis and preventive measures.

Patient did not attribute the disease to any spiritual cause and was prepared to accept any instructions given her. She was optimistic that her signs and symptoms would be relieved because she periodically experiences the same signs and symptoms and get relieved.

1.10 Literate Review

Sickle cell disease has been known by our African ancestors for a long time as a disease which runs in the family and causes frequent attacks of severe pain.

Sickle cell disease is the name of a group of disorders of red blood cells in which the predominant haemoglobin in the red blood cell is haemoglobin S, also known as sickle cell haemoglobin.

It can also be defined as a recessive hereditary blood disorder characterized by erythrocytes that contain defective haemoglobin.

Red Blood Cell

Normal red blood cells are soft and round. They can squeeze through tiny blood vessels to supply oxygen to all parts of the body. Oxygen is carried in red blood cell called haemoglobin. The main haemoglobin in normal red blood cell is called A. Normal red blood cells live for about120 days before they are replaced by new ones. People with sickle cell conditions make different type of haemoglobin A and S. Red blood cell containing mostly haemoglobin S can be stiff, sticky and distorted in shape. Often they resemble a farm tool called sickle. Hence, their name “sickle cell”

Sickle Cell With Vaso-Occlusive Crisis

This is the most common crisis of sickle disease. It is also known as painful crises or infarctive crisis. Usually, it appears periodically after age five. It results from blood vessels obstruction by rigid, tangled sickle cells which cause tissue anoxia and possibly necrosis.

A Vasco-occlusive crisis is characterized by severe abdominal pains, thoracic, muscle or bone pain and possible increased jaundice, dark urine or low grade fever. Patients with long term disease may experience autosplenectomy, in which splenic damage and scaring is so extensive that the spleen shrinks and become impalpable. This can lead to streptococcus pneumonia sepsis which can be fatal without prompt treatment.

Incidence Of Sickle Cell Disease

The disease is found predominantly in Africans and Black Americans. It also occurs in people from Mediterranean and Arab countries. It affects both males and females.

World Distribution Of The Disease

Sickle cell disease is found in people from many part of the world. It is not a disease of only black people. While it affects mostly people of African origin, it also affects people from the Mediterranean, Middle East and India

Medical Problems Of People With Sickle Disease

Sickle cell disease is a life-long disease, but those who have it are not always ill. Their well periods are interrupted without warning, by complications of the disease. Some of the complications are serious enough to cause death at an early age.

Sickle cells are destroyed rapidly in the body, and, in people with sickle cell disease-SS, these cells live for about 16 days. This causes anaemia and also yellowing of the eyes.

Stiff and sticky, sickle cells block flow to body tissues, denying them oxygen and nutrients. Such tissue becomes inflamed, causing pain and damage to the organs of the body.

Blockage of blood flow leads to problems such as pain attacks, stroke, destruction of the lung tissue and Priapism

People with sickle cell disease cannot fight well against certain bacterial infections and malaria. Infections from these germs are leading cause of death in young children with sickle cell disease.

Aetiology

It's a genetic condition caused by the transfer of haemoglobin S gene from parents to their offspring.

Pathophysiology

The defect occurs when there is a single amino acid substitution in the beta chain of haemoglobin. The normal haemoglobin contains two alpha (α) and two beta (β) chains. There are two genes for the synthesis of each chain. People with the trait AS and AC have inherited only one of the abnormal gene so their red blood cell can synthesis both normal beta chain and beta sickling. Thus they have normal A and haemoglobin S.

If two people with the trait marry, some of their children may inherit two abnormal genes and will then have only beta sickling chain and haemoglobin S. These children have the condition.

The sickling heamoglobin is less soluble than haemoglobin A, especially when it gives out its oxygen and when the pH is below normal, firm crystals are formed within the cells which are distorted and assume a crescent or sickle shape. It increases the viscosity of the blood which then does not flow as readily through the capillary. Also, the haemoglobin lifespan is about 26-35 days instead of the normal 120 days, so there is frequent breakdown of the red cells causing jaundice.

Forms Of Sickle Cell Disease

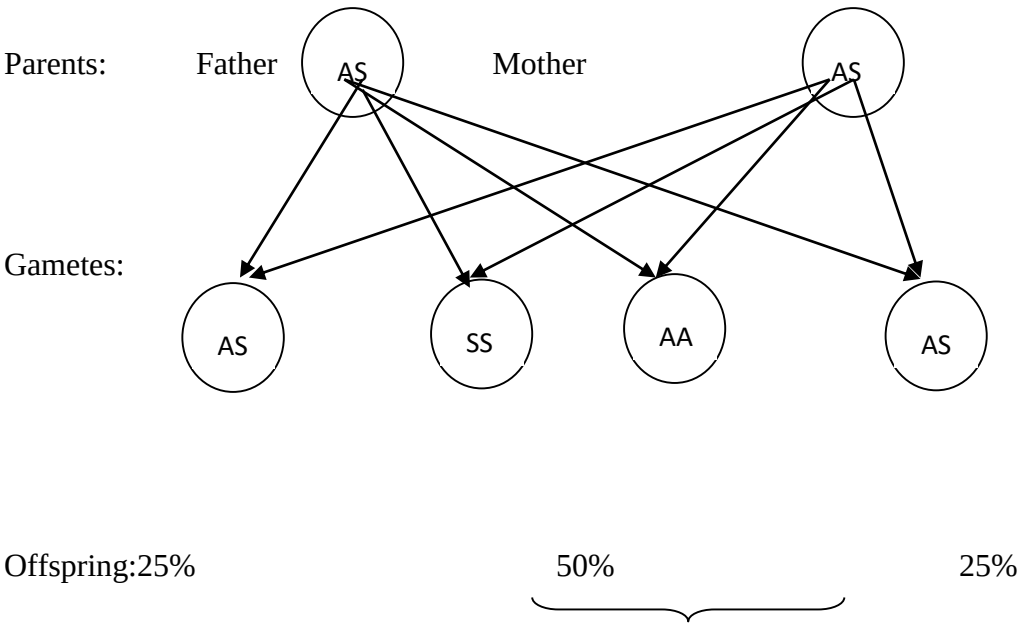
There are basically four most common forms namely:

1. SS
2. SC
3. S beta-plus thalassemia
4. S beta-zero thalassemia

The Inheritance Pattern Of Sickle Cell Disease

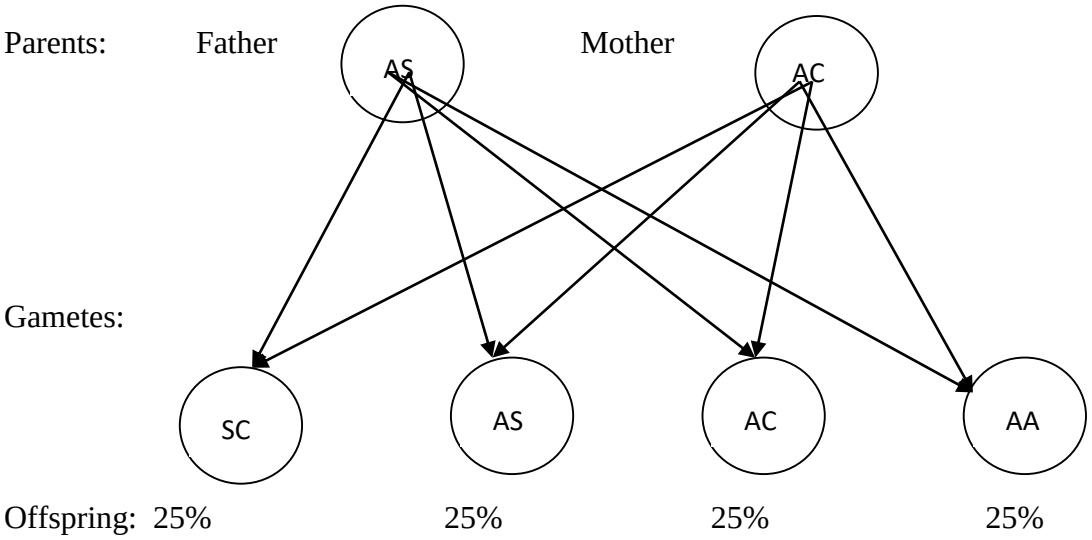
Sickle cell conditions are inherited from parents in much the same way as blood type, hair colour and texture, eye colour and other physical traits. The type of haemoglobin a person makes in the red blood cells depend on what haemoglobin genes are inherited from his parents. The figures below show the inheritance pattern of sickle cell disease.

Figure I



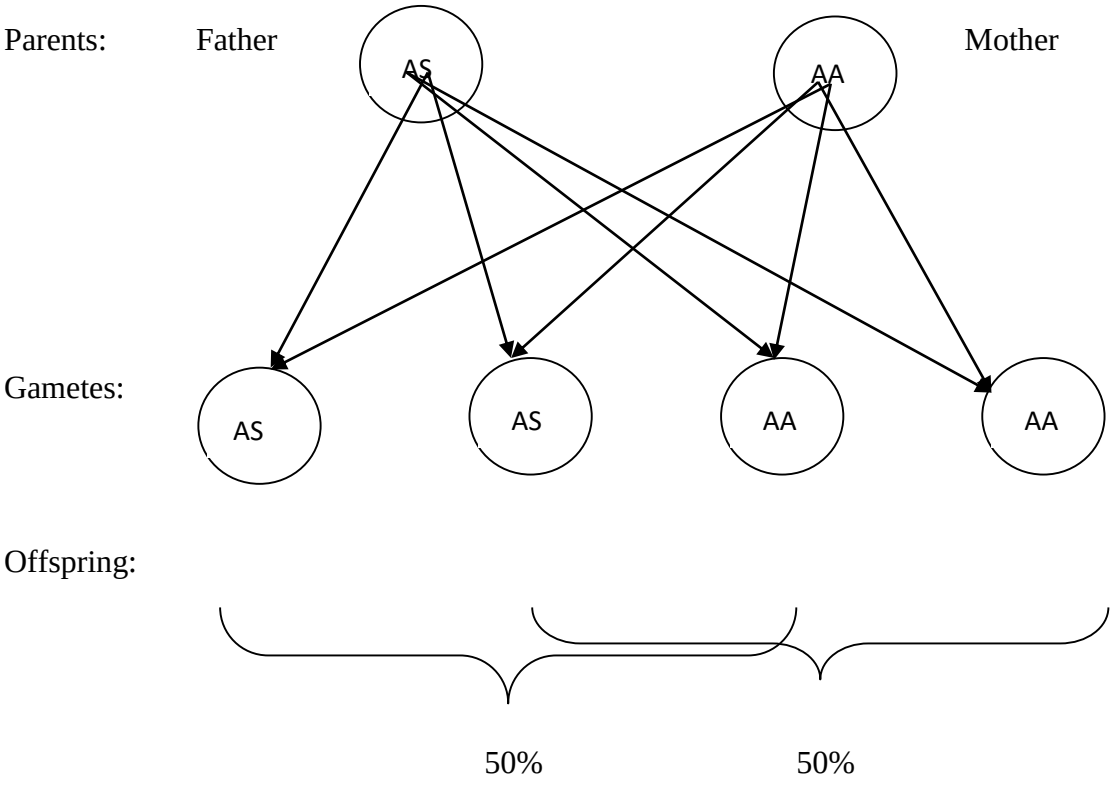
The above illustration in*Figure I* indicates that there is 25% chance of possessing a normal heamoglobin (AA), 25% for the infant to develop sickle cell anaemia (SS) and 50% chance of being a carrier or possessing sickle cell trait (AS) when both parents are carriers of the sickle cell trait.

Figure II



When one parent has a sickle cell trait (AS) and the other (AC), there is 25% chance of possessing normal haemoglobin (AA), 25% chance of possessing a trait of either (AC) and 25% chance of becoming a carrier with (AS) trait while there is another chance 25% carrying an abnormal (SC) as illustrated in *Figure II*

Figure III



The illustration in *Figure III* above indicates that when two parents with one being a carrier (AS) and the other possessing a normal haemoglobin (AA), there is 50% chance of their offspring possessing normal haemoglobin (AA) and 50% chance of possessing sickle cell trait or being carriers (AS).

Figure IV

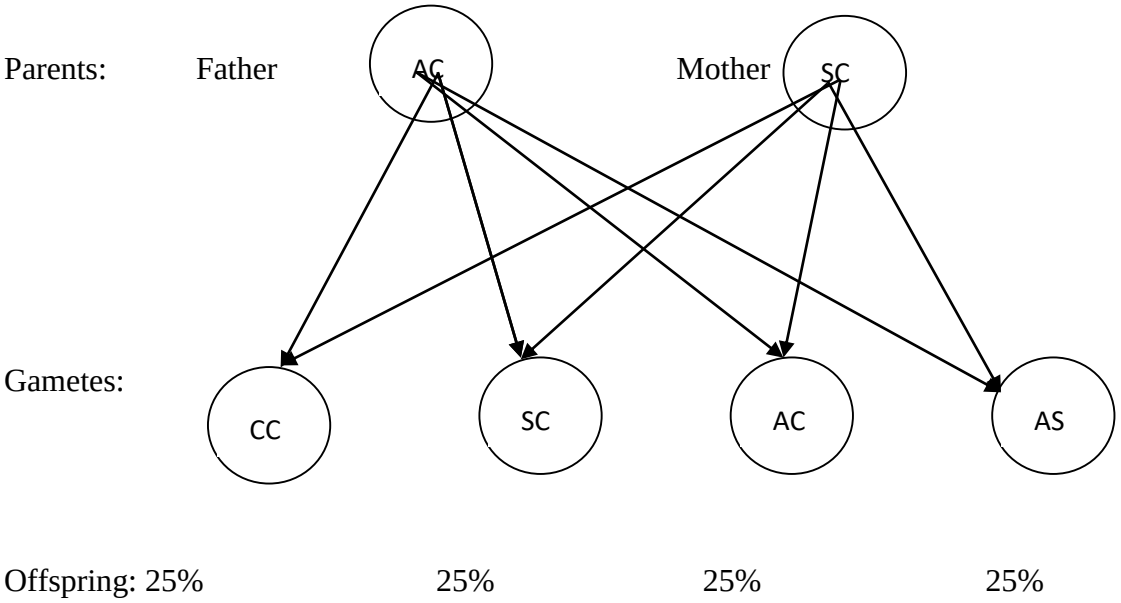


Figure IV illustrates one parent being a sickle cell carrier (AC) and the other sickle cell (SC). In this case, there is 25% chance of their offspring being carrier AS, AC or CC with the remaining 25% having sickle, (SC).

Sickle Cell Trait

A trait is a common word for a condition where a person gets an abnormal gene from one parent and the normal type of that from other parent. If he gets the abnormal genes from both parents he is said to have the disease.

Sickle cell trait is described as a heterozygous form of the disease. Here, the individual inherits one haemoglobin C or S from one parent. Such person's seldomly experience sickle cell crises and have life expectancy and their frequency of hospitalization do not differ from those with normal haemoglobin A.

Sickle Cell Anaemia

Sickle cell anaemia is a severe hemolytic anaemia that results from inheritance of the sickle haemoglobin S gene from both parents. The gene causes the haemoglobin molecule to be defective. That is, it causes the red blood cell to assume crescent of sickle shape. These red bloods impair circulation resulting in chronic ill health periodic crises, long term complications and premature death.

Sickle Cell Crisis

The term "sickle cell crisis" is used to described several independent acute conditions occurring in patient with sickle cell disease

Clinical Features Of Sickle Cell Disease

1. Enlargement of liver and spleen (hepatosplenomegaly)
2. Dizziness
3. There is jaundice
4. Swelling of fingers and toes
5. There is pyrexia
6. There is loss of appetite
7. Severe joint pains
8. Protrusion of the abdomen
9. Malaise
10. Chest pains and shortness of breath
11. Severe abdominal pains
12. Continuous premature destruction of red blood cell resulting in decrease haemoglobin level

Diagnostic Investigation Of Sickle Cell Disease

In order to establish the correct diagnosis, both parents need to be tested followed by the following investigation.

1. Haemoglobin (Hb) electrophoresis. This involves taking of blood sample on the umbilical cord at birth to perform sickle cell screening.
2. Positive family history and typical features suggest sickle cell anaemia.
3. Haemoglobin level estimation may reveal low haemoglobin level.
4. Ophthalmoscopic examination reveals comma-shaped vessels in the conjunctivae.
5. White Blood cell count
6. Red Blood cell count

Factors That Precipitate Sickle Cell Crisis

1. Exposure to extremes of temperature either cold or hot
2. High altitude
3. Stress
4. Alcoholism
5. Dehydration
6. Pregnancy
7. Infection such as urinary tract infection
8. Malaria
9. Extremes of emotion either over excitement or depression
10. Anxiety

Complications Of Sickle Cell Disease

1. Congestive heart failure
2. Leg ulcers

3. Renal failure
4. Periodic bone pain
5. Anaemia
6. Splenomegaly
7. Hepatomegaly
8. Cholelithiasis (presence of gall stones in the gall bladder or bile ducts)
9. Opoiod tolerance
10. Osteomyelitis
11. Priapism and infraction of the penis
12. Acute papillary necrosis
13. Stroke
14. Decreased immune reactions

Treatment Of Sickle Cell Crisis

There is no effective form of treatment for sickle cell disease. The use of drugs is often for supportive and conservative treatment. The basic aim of treatment is to alleviate symptoms and control or reduce painful crisis.

1 Analgesics such as Diclofenac and Paracetamol to reduce pain and pyrexia.
2 Vitamin supplements such as Folic acid, Vitamin B-complex and Fersolate to boost appetite and prevent anaemia.
3 Antibiotics like Cefuroxime are given to control infection.
4 Blood transfusion may be given in case of severe anaemia.
5 Intravenous normal saline are often prescribed for hydration and to reduce blood viscosity
6 Oxygen therapy is given to prevent hypoxaemia

Nursing Intervention And Management

Psychological care:

Patient was reassured psychologically to allay her of any fear and anxiety and to relieve her thoughts about the disease condition. To ensure psychological care, the following measures should be put in place.

- ✓ The patient was reassured that she is in the hands of competent health works and everything possible would be done to relieve her of her disease. All procedures as well as management was well explained to her and parents to gain their co-operation before they were carried out. Patient and her parents were allowed to ask questions and express their feelings. Answers to question were given in clear and simple terms.
- ✓ Diversional therapy such as watching of television, listening to music and news on the radio was encouraged to divert client's attention from the disease condition.

Position

The patient is assisted to assume a comfortable position such as semi-fowlers position or position which is not contraindicated to patient's condition to promote comfort, rest and to promote or facilitate breathing. Extra pillows are provided to enhance comfort at painful areas.

Rest and Sleep

The main aims of ensuring adequate rest and sleep are to conserve energy, promote relaxation and also to relieve psychological and physiological stress. Nursing measures carried out to attain maximum rest and sleep includes the following.

- ✓ A comfortable bed free from wrinkles and creases was provided to make client comfortable in bed.

- ✓ Any unpleasant odour was removed from bed side and adequate ventilation was provided by opening nearby windows when client was feeling hot. Warm beverage was given in the evening and provision of adequate warmth by giving patient blanket to stimulate sleep.

Observation

Patient is monitored or observed at regular intervals on the following to know whether the condition is progressing or deterioration.

- ✓ Vital signs such as temperature, pulse, respiration and blood pressure are monitored.
- ✓ Patient's orientation to time, place and person is also observed to know the level of consciousness.
- ✓ Signs and symptoms of sickle cell crises and chronic complications like congestive hearts failure are monitored so that they can be solved appropriately.
- ✓ Input and output of patient are carefully monitored and recorded in the daily fluid chart to assess patient's hydration status.
- ✓ Assessment for tenderness and swelling of joints and joint deformities is also done.
- ✓ Signs and symptoms of infections such as fever or chills should be assessed for.
- ✓ Intravenous infusion in situ is also monitored to know whether the infusion is dripping well.
- ✓ Patency of the tube and the site of infusion are also observed for any swelling or discolouration of the skin.
- ✓ Observation for the amount of colour and odour of client's urine is also done.

Personal Hygiene

Personal hygiene is carried out in order to promote personal cleanliness and comfort. Measures put in place to enhance personal hygiene of patient are as follow:

- ✓ Client is given assisted bed bath at least twice daily in order to remove sweat and dirt from the skin, improve circulation and make client feel more comfortable and relaxed. During the process pressure areas are examined and treated with a barrier cream to prevent pressure sores.
- ✓ The patient's mouth is cared for using toothbrush and pepsodent toothpaste twice daily to prevent halitosis and gingivitis and to improve appetite.
- ✓ patient's finger and toe nails are soaked in warm water for 10-15 minutes and trimmed to prevent them from harbouring microbes and injuring herself. The hair is washed to prevent dirt and infection, example, pediculosis.
- ✓ The bed linens are changed when they get dirty or soiled to prevent infection and provide comfort. The patient is advised to wash her hands with soap and water before and after eating and after visiting the washroom.

Nutrition

In order to ensure that patient has a well nourishing diet, the following measures were implemented:

- ✓ It was ensured that an adequate diet is given to patient to meet her nutritional requirements which are rich in nutrients like carbohydrates to give energy, proteins to repair worn out tissues, fats and oil for energy, vitamins and minerals to improve the immune system and roughage to prevent constipation.
- ✓ The patient was advised to take a lot of fluids to reduce blood viscosity during crises and to flush out the circulatory system of any toxins.
- ✓ Patient was involved in the planning of her diet taking into consideration her likes and dislikes as well as her cultural background.
- ✓ It was ensured that patient's mouth is rinsed with enough warm water after sleeping before after serving meals to stimulate her appetite and after meals.

- ✓ Meals were served in bits and attractively to increase patient's appetite. Snacks and fruits were served in between meals to supplement food eaten.

Exercise

The patient is advised to undertake mild or moderate exercises as her condition can permit example flexion of her legs and arms to promote circulation and prevent stiffness of joints and constipation. patient was also assisted to sit up in bed and walk around the hospital ward.

Elimination

Patient was served with warm bedpan and urinal on request. The amount, colour and odour of stool and urine was observed and recorded. If patient experiences difficulty in micturation, warm compresses were applied to the lower abdomen and nearby taps were opened which has a psychological effect on patient's micturation process. Also, adequate intake of fluids was encouraged.

However, if all these fail, a urethral catheter may be passed. It was ensured that client's meals contained adequate roughage to prevent constipation.

Health Education

Patient was educated about her disease condition such as the exposure to cold, stress, alcoholism and dehydration and the need to avoid them. The patient was also educated on the signs and symptoms of sickle cell crises, examples headache, joint pains, anorexia, abdominal pains and constipation so that patient will have insight into her condition.

Patient was educated on the need to prevent infection in order to prevent sickle cell crises. It was explained to patient the need to increase fluid intake to prevent dehydration and reduce blood viscosity. Also, education was given to patient on the need and how to take prescribed drugs correctly after discharge. Patient was encouraged to take in adequate amount of folic rich foods like green leafy vegetables to prevent anaemia. patient was advised to take in foods that

contain high amount of roughage, protein and carbohydrate to prevent constipation, repair worn out tissues and provision of energy respectively. It was stressed to the patient the need to inform all health care providers that she has sickle cell disease before any treatment was given her.

Chemotherapy

The eight rights of drug administration were adhered to. That is right drug, right patient, right route, right time, right dose, right documentation, right to refuse drug and the right of the patient to the physician caring for her., Malaria prophylaxis was given, prescribed antibiotics and analgesics such as intravenous Cefuroxime and tablet Diclofenac were administered to fight infections and relieve pain respectively. Haematinics example folic acid was administered to improve upon haemoglobin level. The doctor was assisted to administer intravenous fluids to prevent dehydration. The desired and side effects of administered drugs was observed for and documented in the nurse's note.

1.11 Validation of Data

From what patient said to me as well as clinical manifestations presented by patient, for example jaundice, joint pains and anorexia, it was established that the patient was suffering from sickle cell disease (SS) with vaso-occlusive crises. All investigations carried out on the patient were compared with standard of measurements. All information was also cross checked with records to make sure they were free from errors.

CHAPTER TWO

ANALYSIS OF DATA

2.0 Introduction

This is the second step of nursing process and it is defined as drawing of conclusion from information gathered on patient through laboratory investigations, clinical features and treatment given, by comparing them with standards to verify data and keep it free from misinterpretations. Comparison of data with standards has been tabulated below.

2.1 Comparison of Data with Standard

This is comparing the data collected with that of the standards which includes diagnostic investigations, causes, clinical features, treatment and complications.

A. Diagnostic Tests/Investigations

Test is defined as an examination or trial (Weller, 2014). Investigation refers to procedures performed to establish a diagnosis, to monitor a person's health, disease or the effectiveness of treatment (Weller, 2014). These investigations were carried out on patient;

1 Blood for malaria parasites

2 Blood for grouping and cross-matching

3 Full blood count

4 Blood for haemoglobin electrophoresis

Table 1: Comparison of Test Done on Patient to Literature

Test in literature review	Test conducted on patient
1. Hb electrophoresis	1. Hb electrophoresis was done
2. Family History	2. Family History was taken
3. Haemoglobin level	3. Haemoglobin level was checked
4. Ophthalmoscopic examination	4. Ophthalmoscopic examination was not done
5. White Blood cell count	5. White Blood cell count was checked
6. Red Blood cell count	6. Red Blood cell count was checked
7. Blood film for malaria parasite was not in literature review	7. Blood film for malaria parasite was done
8. Grouping and cross matching was not in literature review	8. Grouping and cross matching was done

From the table above, Hb electrophoresis, haemoglobin level, white blood cell count, red blood cell count and family history which are part of the literature review were ordered which helped in the management of the crisis. Other test which was not part of the literature review such as malaria parasite was done to rule out malaria.

Table 2: Results of diagnostic investigations carried out on patient

Date	Specimen	Investigation	Result	Normal Value	Interpretation	Remarks
12/11/22	Blood	Malaria Parasite	No malaria parasite seen	No malaria should be present	No malaria	No treatment given
12/11/22	Blood	Grouping and cross-matching	Blood group 'O' Rhesus Positive	Blood groups A, B, AB, O	Patients belongs to blood group O	Patient was not transfused
12/11/22	Blood	Haemoglobin level estimation	11.5 g/Dl	male: 11.5 – 18 g/dL Female: 11.5 – 16 g/dL	Patient was not anaemic because haemoglobin level was within the normal range	No treatment
12/11/22	Blood	White blood cell count	24.0 k/Ul	4-10 k/uL	Pathogenic infection was present	Antibiotic therapy was prescribed. Intravenous

						Cefuroxime 750mg tds × 24 hrs

Table 2: Results of diagnostic investigations carried out on patient cont'd…

Date	Specimen	Investigation	Result	Normal Value	Interpretation	Remarks
12/11/22	Blood	Red blood cell count	4.3 mlul	4.20-6.30 mlul	Normal red blood cell count	No treatment
12/11/22	Blood	Haemoglobin electrophoresis (SS)	Sickling Positive	Sickling positive or negative	Patient has a sickle cell diseases	No treatment given

B. Cause of Patient Condition

With reference to the literature review, patients condition was inherited, she thus inherited an abnormal haemoglobin S and S from her parents. Her disease condition was triggered by exposure to cold.

C. Clinical features of Patient's Condition

Table 3: Comparison of clinical features in literature review and that exhibited by the client

	According to Literature Review	**Exhibited by Client**
1	Enlargement of liver and spleen (hepatosplenomegaly)	There was no hepatosplenomegely on abdominal examination
2	Dizziness	Patient did not experience any dizziness
3	There is jaundice	Patient was not having jaundice
4	Swelling of fingers and toes	Patient's toes were not swollen
5	There is pyrexia	Patient presented pyrexia with temperature 39.0ºC
6	There is loss of appetite	Patient experienced loss of appetite
7	Severe joint pains	Patient had severe joint pains
8	Protrusion of the abdomen	There was no protrusion of the abdomen

Table 3: Comparison of clinical features in literature review and that exhibited by the client cont'd…

	According to Literature Review	**Exhibited by Client**
9	malaise	Patient had malaise
10	Chest pains and shortness of breath	Patient complain of chest pains but no shortness of breath
11	Severe abdominal pains	Patient did not complain of abdominal pains
12	Continuous premature destruction of red blood cell resulting in decrease haemoglobin level	There was no continuous premature destruction of red blood cell. Haemoglobin 9.0g/dL

Table three indicates that patient exhibited about 95% of the clinical features of sickle cell disease as enumerated in the literature review.

D. Medical Treatment

Treatment refers to the method of dealing with a disease (Weller, 2014). Medications given to patient during her period of hospitalization aimed at managing the crisis and preventing complications were;

1 Injection Diclofenac 75mg start, then 75mg Prn × 48 hours
2 Intravenous Normal saline 500mls × 3 days
3 Intravenous Cefuroxime 750mg tds × 24 hours
4 Tablet Diclofenac 50mg bd × 5 days
5 Tablet Folic acid 5mg daily X 30 days
6 Tablet Fersolate 100mg tds × 30 days

Table 4: Treatment Given to Patient Compared with Literature Review

Medical Treatment in literature review	Treatment given to patient
1. Analgesics such as Morphine, Codeine, Paracetamol, Diclofenac, Ibuprofen	1. Analgesics given were; Injection Diclofenac, Tablet Diclofenac
2. Haematinics such as Folic acid	2. Tablet Folic acid and Tablet Fersolate were given to patient.
3. Antibiotics like Cefuroxime	3. Intravenous Cefuroxime was given to patient.
4. Blood transfusion	4. Transfusion was not done (Hb was 11.5 g/dL).
5. Intravenous normal saline	5. Intravenous Normal saline was given to patient.
6. Oxygen therapy	6. Oxygen was not given

From the table 4, comparison of drugs in the literature review with drugs given to patient, the treatments given to patient were in line with the literature. Blood transfusion was not done because patient responded perfectly well to the drugs which he was given.

Table 5: Pharmacology of Drugs Administered to Patient

Date	Drug	Dosage/ Route of Administration (Literature)	Dosage/ Route of Administration Given to Patient	Classification	Desired Effect	Actual Effect Observed	Side Effect & Remedies
12/11/22	Injection Diclofenac	**Dosage:** 75mg PO q12hr. **Route** Oral, IM	75mg start, then 75mg prn × 48 hrs intramuscularly 50mg bid	Non-steroidal anti-inflammatory drug (NSAID)	Inhibits prostaglandin synthesis and reduces inflammation	Patient was relieved of joint pains	Depression, hypertension, blurred vision none was observed in client
12/11/22	Intravenous normal saline	**Dosage:** Depends on patient's fluid and electrolyte level **Route** IV	500mls daily × 3 days intravenously	Isotonic solution and fluid volume replacement	It corrects dehydration and maintains electrolyte balance	Patient was re-hydrated, fluid and electrolyte balance maintained	Fluid overload and pulmonary oedema. None of these were observed

Table 5: Pharmacology of Drugs Administered to Patient Cont'd…

Date	Drug	Dosage/ Route of Administration (Literature)	Dosage/ Route of Administration Given to Patient	Classification	Desired Effect	Actual Effect Observed	Side Effect & Remedies
12/11/22	Intravenous Cefuroxime	**Dosage** 750 mg every 6–8 hours **Route** Oral, IV, IM	750 mg tds × 24 hrs intravenously	Anti-infective	To prevent multiplication and spread of susceptible bacterial	Patient's condition improved as there was no spread of infection	Nausea, headache. None of these were observed
12/011/22	Tablet folic acid	**Dosage** **10mg daily** **Route** **Oral**	5mg daily × 30 days orally	Vitamin supplement	Needed for erythropoiesis, increases RBC, WBC and platelet formation in anaemia	It help in the formation of red blood cells (RBC) thereby increasing the haemoglobin level	Allergic reactions (rash, pruritus). None was observed

Table 5: Pharmacology of Drugs Administered to Patient Cont'd…

Date	Drug	Dosage/ Route of Administration (Literature)	Dosage/ Route of Administration Given to Patient	Classification	Desired Effect	Actual Effect Observed	Side Effect & Remedies
12/11/22	Tablet Fersolate	Dosage 100-200mg once daily Route Oral	100mg daily × 30 days orally	Haematinic	Replaces iron stores needed for red blood cell development energy and oxygen transport	It helped to increase the haemoglobin level in patient from 11.5g/dl to 16.0g/dl	Nausea epigastric pain. None was observed

E. Complications

According to literature review, the complications of sickle cell disease include congestive heart failure**,** leg ulcers**,** renal failure**,** anaemia, etc. None of these complications was observed.

2.2 Patient / Family Strengths

This involves what the patient and her family members could do to help the health providers in the management of the patient to promote health delivery. The following strengths were observed in patient and family during their period of hospitalization.

1. (12/11/22) Patient could take in cold drinks and verbalize her degree of hotness
2. (12/11/22) Patient could express the intensity of the pain
3. (12/11/22) Patient could note the location of pain.
4. (13/11/22) Patient could eat 1/3 of 500ml of porridge.
5. (14/11/22) Patient and relatives asked questions about the condition.
6. (15/11/22) Patient expressed interest in gaining knowledge on the causes, prevention, signs and symptoms and management of Sickle cell disease.

2.3 Patient's Health Problems

When effective and efficient nursing care is rendered to the patient, the nurse is able to detect any health problem through observation and collection of data from patient or family member. During care of the patient the following health problems were identified

1. (12/11/22) Patient had fever (39.0^0C)
2. (12/11/22) Patient complained of pains at her joints and abdomen.
3. (12/11/22) Patient complains of having difficulty in sleeping.
4. (13/11/22) Patient report loss of appetite

5. (14/11/22) Patient and relative were anxious
6. (15/11/22) Patient and relative had inadequate knowledge on Sickle cell disease.

2.4 Nursing Diagnosis

The following nursing diagnoses were formulated for patient and family.

1. (12/11/22) Hyperthermia (39.0^{o}C) related to vessel wall occlusion by the sickled cells.
2. (12/11/22) Acute pain (joints) related to intravascular sickling with localized stasis and occlusion.
3. (12/11/22) Sleep pattern disturbance (insomnia) related to Joint pains.
4. (13/11/22) Imbalanced nutrition (less than body requirement) related to loss of appetite.
5. (14/11/22) Anxiety related to unknown outcome of disease process.
6. (15/11/22) Knowledge deficit related to complexity of information on sickle cell disease.

CHAPTER THREE

PLANNING FOR PATIENT/FAMILY CARE

3.0 Introduction

The nursing care is a systematic approach used in carrying out nursing activities with and for patient. It brings about the method of primary nursing care. It also enables the health team to determine the patient's health problems. After these problems have been identified, the nurse will formulate diagnosis and plan care that is adequate enough for the patient and implement.

1. Patient would be able to maintain a normal body temperature (36.2^{o}C – 37.2^{o}C) within 6 hours as evidenced by
    a. Nurse checking and recording temperature to be in normal range (36.2^{o}C – 37.2^{o}C).
    b. Patient relative verbalizing patient's body not warm to touch.
2. Patient would be relieved of joint pains within 48 hours as evidenced by
    a. Patient verbalizing that she is not feeling pains anymore
    b. Nurse observing patient being relaxed in bed.
3. Patient would regain her normal sleeping pattern within 48hours as evidenced by;
    a. Patient verbalizing ability to sleep within few minutes of lying down.
    b. Nurse observing client sleeping comfortably in bed
4. Patient would be able to attain and maintain adequate nutrition within 48 hours as evidenced by:
    a. Patient consuming at least half plate of meal served her.
    b. Nurse observe patient verbalizing the ability to eat well
5. Patient and relatives would be relieved of anxiety throughout the period of hospitalization as evidenced by;

a. Nurse observing patient to have relaxed facial expression.
b. Patient verbalizing anxiety has been subsided

6. Patient and relatives would attain adequate knowledge on Sickle cell disease; causes, its treatment and prevention within 24hours as evidenced by;
    a. Patient and relatives demonstrating the measures to reduce the occurrence of crises.
    b. Nurse observing patient and relatives asking questions to seek for clarification about the condition.

Table 6: Nursing Care Plan For Miss I.B.

Date/ Time	Nursing Diagnosis	Objectives/ Outcome criteria	Nursing Orders	Nursing intervention	Date/ Time	Evaluation	Sign
12/11/22 11:00am	Hyperthermia (39.0^oC) related to vessel wall occlusion by the sickled cells.	Patient would be able to maintain a normal body temperature ($36.2^oC – 37.2^oC$) within 6 hours as evidenced by 1. Nurse checking and recording temperature to be in normal range ($36.2^oC – 37.2^oC$). 2. Patient relative verbalizing patient's body not warm to touch.	1. Reassure patient 2. Tepid sponge patient when necessary 3. Serve patient with cold drink to help reduce the temperature 4. Monitor vital signs 4 hourly 5. Keep louvers open to provide ventilation. 6. Document care rendered	1. Patient was reassured that measures will be taken to bring down the temperature to normal range. 2. Patient was sponged with tepid water and towel, leaving drops of water on the skin to be dried by evaporation. 3. Patient was served with cold fruit juice to help reduce temperature. 4. Patient's vital signs especially temperature was monitored 4hourly. 5. Louvers were kept open to ensure adequate ventilation. 6. All procedures carried out were documented.	12/12/22 11:00am	Goal fully met as temperature was checked and recorded to be 36.3^0C and patient verbalized that her body is not warm to touch.	D.D.

Table 6: Nursing Care Plan For Miss I.B. Cont`d

Date/ Time	Nursing Diagnosis	Objectives/ Outcome criteria	Nursing Orders	Nursing intervention	Date/ Time	Evaluation	Sign
12/12/22 11:20am	Acute pain (joints) related to intravascular sickling with localized stasis and occlusion	Patient will be relieved of joint pains within 48 hours as evidenced by; 1. Patient verbalizing that she is not feeling pains anymore. 2. Nurse observing patient been relaxed in bed.	1. Reassure patient. 2. Assess level of pain 3. Apply warm compresses to the joint 4. Encourage ROM exercises 5. Ensure adequate IV hydration of patient 6. Serve prescribed analgesics contraindicated.	1. Patient was reassured that appropriate measures will be taken to help her relieved of the pains. 2. Patient's pain was assessed using the numerical pain rating scale (0-10) and patient scored 7. 3. Application of warm compresses were ensured. 4. Patient was encouraged to do range of motion exercises to prevent joint stiffness. 5. Patient was hydrated with intravenous fluid of normal saline 500mls daily. 6. Prescribed medication of IM Diclofenac 75mg Prn × 48 hours 10mg was administered.	14/11/22 11:20am	Goal fully met as patient verbalized that she is not feeling pains anymore and nurse observed patient been relaxed in bed.	D.D.

Table 6: Nursing Care Plan For Miss I.B. Cont`d

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing orders	Nursing Interventions	Date/ Time	Evaluation	Sign
12/11/22 11:25am	Sleep pattern disturbance (insomnia) related to joint.	Patient would regain her normal sleeping pattern within 48hours as evidenced by; a. Patient verbalizing ability to sleep within few minutes of lying down. b. Nurse observing patient sleeping comfortable in bed.	1. Assess patient's sleep pattern. 2. Encourage regular evening routine that promote sleep. 3. Make sure there is no noise at the ward. 4. Prepare and make a comfortable bed for patient to ensure quality sleep. 5. Plan sleep and activity periods. 6. Assess patient each night and morning to determine the quality of sleep she had.	1. A complete history of patient's sleep was obtained which indicated that patient sleeps for at least 8hours normal and a daytime nap of 1-2hours. 2. Bathing, urinating and toileting before going to bed were ensured for the patient. 3. The ward was kept calm and conducive for sleeping. 4. A simple warm occupied bed free from creases and cramps was made for patient for to ensure a comfortable sleep. 5. A plan was developed for patient to sleep that is she was to sleep for 8hours at night uninterrupted and 2hours during the day. 6. On assessment it showed that, patient sleeps for 8hours at night and 2hours during the day.	14/11/22 11:25am	Goal fully met as patient verbalized she could sleep within few minutes of lying down and nurse observed patient sleeping comfortable in bed.	D.D.

Table 6: Nursing Care Plan For Miss I.B. Cont`d

Date/Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
12/11/22 11:30am	Anxiety related to unknown outcome of disease process.	Patient and relatives would be relieved of anxiety throughout the period of hospitalization as evidenced by; 1. Nurse observing patient to have relaxed facial expression. 2. Patient verbalizing anxiety has subsided.	1. Reassure patient's relatives of competent nursing care that their mother's health status will return to normal. 2. Explain disease condition to patient and family 3. Orientate patient and relatives to the ward and the activity which comes on in the ward.	1. Patient and family were reassured of the competency of the nursing care which made her trust the healthcare team for treatment. 2. The cause, signs and symptoms, treatment and prevention of the disease condition was explained to patient and family. 3. Patient and relatives were orientated to the ward, introduced to the staff nurses and the activities which went on in the ward were also communicated to them.	16/11/22 11:30am	Goal fully met as nurse observe patient having relaxed facial expression and patient verbalised that her anxiety has subsided.	D.D.

			4. Explain the importance of hospitalization to patient's relatives to enhance their cooperation in rendering care. 5. Explain every procedure that will be perform to patient and relatives 6. Allow patient and family to ask question	4. The importance of hospitalization was explained to patient and her family which made them to cooperate for the care. 5. Each procedure to be performed was explained to patient and relatives which won their cooperation. 6. Patient and family were allowed to ask questions and their questions were answered promptly to clear their misconceptions.			

Table 6: Nursing Care Plan For Miss I.B. Cont`d

Date/ Time	Nursing Diagnosis	Objectives/Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign
13/11/22 9:00am	Imbalanced nutrition (less than body requirement) related to loss of appetite	Patient would be able to attain and maintain adequate nutrition within 48 hours as evidenced by: 1. Nurse observe patient consuming at least half plate of meal served. 2. Patient verbalising the ability to eat well.	1. Reassure patient 2. Assess the nutritional status of patient 3. Plan meals with patient, relatives and dietician in order to provide patient with meals of her choice.	1. Patient was reassured that measures will be taken to restore adequate essential nutrients. 2. The nutritional status of patient was assessed by observing patients eating habit and patient only eat about 1/3rd of every food served. 3. Meals were planned with patient by taking into account her preferences 4. The environment was always kept neat and free from nauseated	15/11/22 9:00am	Goal fully met as nurse observed patient consuming all of the meal served and patient verbalised that she could eat well.	D.D.

			4. Serve food attractively and provide pleasant environment during meal times. 5. Educate patient on the need to take in nutritionally rich diets 6. Document procedure	substances such as vomits, urine, stool and dirty linen. 5. Patient was educated on the need to take in nutritionally rich diets as it helps to improve upon patient's condition. 6. Procedure was documented in nurses' notes.			

Table 6: Nursing Care Plan For Miss I.B. Cont`d

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing orders	Nursing Interventions	Date/ Time	Evaluation	Sign
13/11/22 9:20am	Knowledge deficit related to complexity of information on sickle cell disease.	Patient and relatives would attain adequate knowledge on sickle cell disease; causes, its treatment and prevention within 24hours as evidenced by; a) Patient and relatives demonstrating the measures to reduce the occurrence of crises.	1. Reassure the patient and relatives of acquiring much information about sickle cell disease causes, management and prevention. 2. Assess motivation and willingness of patient and family to learn. 3. Adjust teaching according to level of understanding, educational background and learning styles for the patient and relatives.	1. Patient and relatives were reassured of gaining enough knowledge on sickle cell disease causes, management and its prevention. 2. Patient and relative's motivation and willingness to learn was assessed by observing their level of concentration. 3. Teaching was adjusted to the level of understanding, educational background and learning style of the patient and relatives by dividing the topic in subtopics and explaining them into details for maximum	14/11/22 9:20am	Goal fully met as patient and relatives demonstrated measures (not exposing patient to coldness) to reduce the occurrence of crises and nurse observed patient and	D.D.

		b) Nurse observing patient and relatives asking questions to seek for clarification about the condition.	4. Establish good interpersonal relationship with patient and family. 5. Educate patient and family about the clinical manifestation and prevention of sickle cell disease/crisis. 6. Encourage patient and family to ask questions bothering their mind and answer the questions tactfully. 7. Assess the patient and family on what has been taught.	understanding before moving to the next subtopic. 4. Good interpersonal relationship was established with patient and relatives to facilitate the learning process 5. Patient and relatives were educated on the clinical manifestation and prevention of sickle cell disease/crisis. 6. Patient and relatives were encouraged to ask questions bothering their mind and answers were provided tactfully in the language they understand. 7. Patient and her relatives correctly verbalized the causes, management, prevention and complications of sickle		relatives asking questions to seek for clarification about the condition.	

				cell disease/crisis just as they were taught			

CHAPTER FOUR

IMPLEMENTATION OF PATIENT/FAMILY CARE PLAN

4.0 Introduction

The implementation phase of the nursing process involves carrying out the proposed plan of nursing care. The nurse assumes responsibility for the implementation and coordinates the activities of all those involved in implementation, including the patient and family, other members of the nursing team, and other members of the health care team, so that the schedule of activities facilitates the patient's recovery (Hinkle & Cheever, 2014). This chapter gives a vivid account of the nursing care that was rendered to the patient/family from the day of admission until discharge based on the health problems identified. It also deals with follow up visits/home visits to ensure continuity of care.

4.1 Summary of Actual Nursing Care Rendered to Patient/ Family

The actual nursing care rendered to patient and her family started on the day of admission, 12th of November, 2022 to the time care was terminated on 17th of November, 2022. The management of patient and her family was planned to meet their physiological, emotional, spiritual and physical needs. Whiles on admission, routine nursing actions, for example, oral care and medication administration were done and the necessary documentations were also carried out. Summary of care rendered has been discussed on daily basis.

First Day of Admission, (12th November, 2022).

On the 12th of November, 2022 at 11:00am, Miss I.B. arrived on the Female Medical ward per ambulation. She was accompanied by a staff nurse, a rotational nurse, and her parents. They were warmly welcomed to the ward and offered seats. On arrival, patient was completely alert and conscious. Patient had been detained at the emergency unit since yesterday with the diagnosis of vaso occlusive crisis in a known Sickle Cell. The accompanying staff nurse gave me the patient's information. To validate her admission to the Female Ward, her folder number

was input into the hospital's computer system. By mentioning the patient's name and waiting for her to answer, the patient's identity was confirmed. She was made comfortable in an admission bed. Name, sex, age, and home address were all recorded in the admission and discharge book, as well as the daily ward state. Vital signs were checked and recorded accurately as follows:

1	Temperature	39.0^{o}C
2	Pulse	92 bpm
3	Respiration	22 cpm
4	Blood Pressure	121/77mm/Hg
5	Weight	55kg

Physical examination on the patient was performed from head to toe. At the time of admission, Assessment revealed that patient had severe joint pains, high body temperature and general body weakness.

Due to the high body temperature, patient was asked to remove extra clothing, she was given cold drinks, sponged with tepid water and prescribed Intramuscular Diclofenac 75mg stat was given.

Patient and relatives looked anxious. They were reassured to put their thoughts and anxieties to rest. The patient was introduced to the other patients as well as the staff members present, and she was assured of quality healthcare. The hospital's policies on visiting hours and bill payment were discussed. The patient’s parents were given a thorough orientation to the ward.

The following treatment plan were ordered:

1. Injection Diclofenac 75mg start, then 75mg Prn × 48 hours
2. Intravenous Normal saline 500mls × 3 days
3. Intravenous Cefuroxime 750mg tds × 24 hours
4. Tablet Diclofenac 50mg bd × 5 days

5 Tablet Folic acid 5mg daily X 30 days

6 Tablet Fersolate 100mg daily × 30 days

Patient had the following laboratory investigations ordered:

1. Blood for malaria parasites
2. Blood for grouping and cross-matching
3. Full blood count
4. Blood for haemoglobin electrophoresis

Discharge planning was initiated with the relatives thus they will continue the care at home once she is well. Patient was given a brief education on why she was manifesting the sign and symptoms associated with her condition and what she should expect from the medical team as part of her treatment regimen and was also assured of competent nursing care.

On admission, patient temperature was high (39.0^{o}C) and a nursing diagnosis of Hyperthermia (39.0^{o}C) related to vessel wall occlusion by the sickled cells was made. An objective was set to help patient maintain a normal temperature (36.2^{o}C – 37.2^{o}C) within 6 hours and the following nursing interventions were then implemented; Patient was reassured that measures will be taken to bring down the temperature to normal range, Patient was sponged with tepid water and towel, leaving drops of water on the skin to be dried by evaporation, Patient was served with cold fruit juice to help reduce temperature, Patient's vital signs especially temperature was monitored 4hourly, Louvers were kept open to ensure adequate ventilation and All procedures carried out were documented.

At 11:20am, because patient complained of joint pains, a nursing diagnosis of Joint Acute pain (joints) related to intravascular sickling with localized stasis and occlusion was formulated. An objective was set to relieve patient of joint pains within 48 hours and the nursing interventions carried out were; Patient was reassured that appropriate measures will be taken to help her relieved of the pains, Patient's pain was assessed using the numerical pain rating scale (0-10)

and patient scored 7, Application of warm compresses were ensured, Patient was encouraged to do range of motion exercises to prevent joint stiffness, Patient was hydrated with intravenous fluid of normal saline 500mls daily and Prescribed medication of IM Diclofenac 75mg Prn × 48 hours 10mg was administered.

At 11:25am, patient confirmed that she could not sleep and a nursing diagnosis of Sleep pattern disturbance (insomnia) related to joint pains was formulated. An objective to help patient regain her normal sleeping pattern within 48hours was set and the following interventions were carried out; A complete history of patient's sleep was obtained which indicated that patient sleeps for at least 8hours normal and a daytime nap of 1-2hours, Bathing, urinating and toileting before going to bed were ensured for the patient, The ward was kept calm and conducive for sleeping, A simple warm occupied bed free from creases and cramps was made for patient for to ensure a comfortable sleep, A plan was developed for patient to sleep, that is she was to sleep for 8hours at night uninterrupted and 2hours during the day and On assessment it showed that, patient sleeps for 8hours at night and 2hours during the day.

At 11:30am, I realized patient and her relatives were anxious so a nursing diagnosis of Anxiety related to unknown outcome of disease process. An objective was set to relieved patient of anxiety throughout the period of hospitalization and nursing actions carried out were; Patient and family were reassured of the competency of the nursing care which made her trust the healthcare team for treatment, The cause, signs and symptoms, treatment and prevention of the disease condition was explained to patient and family, Patient and relatives were orientated to the ward, introduced to the staff nurses and the activities which went on in the ward were also communicated to them, The importance of hospitalization was explained to patient and her family which made them to cooperate for the care and Each procedure to be performed was explained to patient and relatives which won their cooperation.

Patient and family were allowed to ask questions and their questions were answered promptly to clear their misconceptions.

At 1:00pm, patient took about 1/3rd of her launch served which was ampesi and garden egg stew.

At 2:00pm, patient's vital signs were checked and recorded as indicated in the appendix. Her due medication of Intravenous Cefuroxime 750mg was administered.

At 5:30pm, the objective set at 11:00am to help patient maintain a normal temperature was evaluated and goal was fully met as temperature was checked and recorded to be 36.3^0C and patient verbalized that her body is not warm to touch.

At 5:30pm, patient took rice ball with groundnut soup as supper but consumed only 1/2.

At 6:00pm vital signs were checked and recorded as indicated in the appendix. Her due medications of Tablet Diclofenac 50mg, Tablet Folic acid 5mg and Tablet Fersolate 100mg were administered. At 10:00pm vital signs were checked and recorded as indicated in the appendix. Her due medications of Intravenous Cefuroxime 750mg was administered. Patient slept around 10:30pm.

Second Day of Admission (13th November, 2022)

On the second day of admission, the night nurse reported that patient could not sleep well during the handing over. Miss I.B. had already taken her bath, brushed her teeth and had her locker cleaned. Her vital signs were already checked and recorded as indicated in the appendix. Her due medications of Intravenous Cefuroxime 750mg and Tablet Diclofenac 50mg were administered. At 8:05am, patient was served with white porridge and bread as breakfast but only took about 1/3rd of it. At 8:30am, doctor came and reviewed her and asked us to continue the old treatment plan.

At 9:00am, because patient had loss appetite for food, a nursing diagnosis of Imbalanced nutrition (less than body requirement) related to loss of appetite was made. Objective to help

patient attain and maintain adequate nutrition within 48 hours was set and nursing interventions implemented were; Patient was reassured that measures will be taken to restore adequate essential nutrients, The nutritional status of patient was assessed by observing patients eating habit and patient only eat about 1/3rd of every food served, Meals were planned with patient by taking into account her preferences, The environment was always kept neat and free from nauseated substances such as vomits, urine, stool and dirty linen, Patient was educated on the need to take in nutritionally rich diets as it helps to improve upon patient's condition and Procedure was documented in nurses' notes.

At 9:10am, upon conversation and observation made on patient and relatives, it was realized that they lacked knowledge about the disease she was suffering from, therefore a nursing diagnosis of Knowledge deficit related to complexity of information on sickle cell disease was made. An objective was set to help patient and relatives attain adequate knowledge on sickle cell disease; causes, its treatment and prevention and nursing interventions carried out were; Patient and relatives were reassured of gaining enough knowledge on sickle cell disease causes, management and its prevention, Patient and relative's motivation and willingness to learn was assessed by observing their level of concentration, Teaching was adjusted to the level of understanding, educational background and learning style of the patient and relatives by dividing the topic in subtopics and explaining them into details for maximum understanding before moving to the next subtopic, Good interpersonal relationship was established with patient and relatives to facilitate the learning process, Patient and relatives were educated on the clinical manifestation and prevention of sickle cell disease/crisis, Patient and relatives were encouraged to ask questions bothering their mind and answers were provided tactfully in the language they understand and Patient and her relatives correctly verbalized the causes, management, prevention and complications of sickle cell disease/crisis just as they were taught.

At 10:00am, Intravenous Normal saline 500mls was given to patient.

At 1:00pm, patient took about ½ of her launch served which was rice and tomato stew.

At 2:00pm, patient's vital signs were checked and recorded as indicated in the appendix.

At 5:30pm, patient took fufu and light soup as supper and was able to consumed 2/3rd of it.

At 6:00pm vital signs were checked and recorded as indicated in the appendix. Her due medications of Tablet Diclofenac 50mg, Tablet Folic acid 5mg and Tablet Fersolate 100mg were administered.

At 10:00pm vital signs were checked and recorded as indicated in the appendix. Patient slept around 10:30pm.

Third Day of Admission (14th November, 2022)

On the third day of admission, patient condition was well improved during the handing over. Miss I.B. had already taken her bath, brushed her teeth and had her locker cleaned. Her vital signs was already checked and recorded as indicated in the appendix. Her due medication of Tablet Diclofenac 50mg were administered. At 8:05am, patient was served with Hausa porridge and bread as breakfast

When Doctor reviewed patient during ward round, there were no complaints and the Doctor order for continuity of care.

At 9:20am, the objective set on 12th November, 2023 at 9:20am to help patient attain adequate knowledge on sickle cell disease; causes, its treatment and prevention was evaluated and goal was fully met as patient and relatives demonstrated measures (not exposing patient to coldness) to reduce the occurrence of crises and nurse observed patient and relatives asking questions to seek for clarification about the condition.

At 10:00am, Intravenous Normal saline 500mls was given to patient.

At 11:20am, the objective set on 12th November, 2023 at 11:20am to relieve patient of joint pains was evaluated and goal was fully met as patient verbalized that she is not feeling pains anymore and nurse observed patient been relaxed in bed.

At 11:25am, the objective set on 12th November, 2023 at 11:25am to help patient regain her normal sleeping pattern was evaluated and goal was fully met as patient verbalized she could sleep within few minutes of lying down and nurse observed patient sleeping comfortable in bed.

At 1:00pm, patient took about 2/3rd of her launch served which was kenkey and beans stew.

At 2:00pm, patient's vital signs were checked and recorded as indicated in the appendix.

At 5:30pm, patient took fufu and light soup as supper and was able to consumed 2/3rd of it.

At 6:00pm vital signs were checked and recorded as indicated in the appendix. Her due medications of Tablet Diclofenac 50mg, Tablet Folic acid 5mg and Tablet Fersolate 100mg were administered. At 10:00pm vital signs were checked and recorded as indicated in the appendix. Patient slept around 10:30pm.

Fourth Day of Admission (15th November, 2022)

On the fourth day of admission patient looks better and had a cheerful facial expression. Miss I.B. had already taken her bath, brushed her teeth and had her locker cleaned. Her vital signs were already checked and recorded as indicated in the appendix. Her due medication of Tablet Diclofenac 50mg was administered. At 8:05am, patient was served with rice porridge and bread as breakfast and she consumed all.

When Doctor reviewed patient during ward round, there were no complaints and the Doctor order for continuity of care.

At 9:00am, the objective set on 13th November, 2022 at 9:00am to help patient attain and maintain adequate nutrition was evaluated and goal was fully met as nurse observed patient consuming all of the meal served and patient verbalised that she could eat well.

At 1:00pm, patient took her launch served which was ampesi and garden egg stew.

At 2:00pm, patient's vital signs were checked and recorded as indicated in the appendix.

At 5:30pm, patient took banku and groundnut soup as supper.

At 6:00pm vital signs were checked and recorded as indicated in the appendix. Her due medications of Tablet Diclofenac 50mg, Tablet Folic acid 5mg and Tablet Fersolate 100mg were administered. At 10:00pm vital signs were checked and recorded as indicated in the appendix. Patient slept around 10:30pm.

Day of Discharge/Fifth Day of Admission (18th November, 2022)

Patient woke up feeling strong and better. Report from night nurses indicated that patient was able to sleep well. I greeted Miss I.B., she responded with a cheerful facial expression. I was inquisitive enough to ask patient why she has put up a smiley face. Upon asking, patient said that she feels grateful to have special nursing care rendered to her over the past few days since she was admitted. Miss I.B. had already taken her bath, brushed her teeth and had her locker cleaned. Her vital signs were already checked and recorded as indicated in the appendix. Her due medication Tablet Diclofenac 50mg was administered.

Patient took hausa porridge and bread in the morning at 7:50am.

During routine ward rounds at 11:00am, patient was discharged since her condition was stable and she had no complains. Patient was prescribed Tablet Folic acid 5mg daily for 30 days and Tablet Fersolate 100mg for 30 days to be taken home.

At 11:30am, the objective set on 13th November, 2023 at 11:30am to relieve patient and relatives of anxiety was evaluated and goal was fully met as nurse observe patient having relaxed facial expression and patient verbalised that her anxiety has subsided.

Her relative was informed and the bills were assessed to be paid. Payment was made for medications which were not covered by National Health Insurance Scheme. Patient was educated on the need to eat food containing high fiber like whole grains, the entire essential

food nutrients, for example protein, vitamins and irons, as well as maintaining good personal hygiene. She was educated on the disease condition, emphasis was placed on how to prevent crisis. She was told to always stay hydrated. Patient was made aware of the indications of the drugs given, side effects and adverse effects. She was encouraged to adhere to the medication therapy. Patient was informed to come for review on 24th November, 2022 at the main Out Patient Department. Education on the need for review was done to ensure patient reports on the said date. The need to continue with medications was emphasized. Patient and the family bid the ward inmates and staff goodbye.

4.2. Preparation of Patient/Family for Discharge and Rehabilitation.

Preparation for discharge commenced from the time of admission at the hospital, at 11:00am on 12th November, 2022 till the last day of admission on 16th November, 2022. The patient and family were informed that staying in the hospital was for a temporal period of time. Education of patient and family on the causes, clinical features, treatment and management of sickle cell crisis were reemphasized. This was aimed at helping the patient and relatives in the provision of adequate care. Patient was educated to avoid over the counter medications. Patient was encouraged to take in food rich in the essential food nutrients. Patient and her family were also educated on the need to maintain personal and environmental hygiene to help improve immunity. Emphasis was placed on the need to continue with medication and to report to the hospital if any problem does occur. Patient was also told about the next two home visits which will be carried out to check on her state of health. Patient belongings were packed. Necessary documents were recorded into the admission and discharge book as well as the ward state.

4.3 Follow Up / Home Visit / Continuity of Care

Home visit is a visit made by a health professional to a patient's home, usually with face to face contact between the health professional and the patient, less commonly between health professional and the patient's family.

Home visits were done before and after patient's discharge. It is friendly but a purposeful visit to patient home. Health educations were given and the need for the prevention of complication was reemphasized. It provided a good account on the causes and predisposing factors of patient's illness.

4.3.1 First Home Visit (14th November, 2022)

My first home visit was made on the 14th November, 2022 while patient was on admission. A prearranged visit was made to Krenkuase in Kwame Danso district in Bono East region, where patient resides. The purpose of this visit was to know patient's residence and the environment in which she lives, verify the information given to me as well as to identify the risk factors such as familial tendency and stresses that can precipitate her condition and also to identify any nearest health facility or healthcare provider I would hand over patient to during the termination of care. Patient and relative were informed about my intention to visit their home whiles she was still on admission. On the said date, I went with patient's sister and one of her friends. I left Kwame Danso District Hospital around 11:30am and alighted at patient's residency at 11:40am. The medium of transportation was a tricycle. Their house is nearer to Seventh Day Adventist (S.D.A.) church. On arrival, I met the patient's father and other siblings in the house. He welcomed me and since he had already met me at the hospital, there was a little need for a through introduction of myself. I was offered a seat. He asked of my mission and I explained every detail of my reasons stated above.

The house is a 'self-contain' with 8 bedrooms, 2 toilet and bathrooms. The house is built with blocks, not painted, roofed with aluminum sheets, had windows but most of them were closed so I educated them on the need to open the windows to promote proper ventilation. Their source of water is a Well dug in the house and they have electricity. They have a plastic container used to store water which was well covered with a lid. They have a dustbin with a well-fitting lid in which they dump their waste materials and it is emptied every morning into Zoomlion waste-

collector which is within walking distance. The environment was well swept and clean.

The patient lives in the house with her with father and other family members. Observations made in patients' room revealed well-furnished wall with television set, sound system, a ceiling fan, bed, couch and a wooden center table, it was very neat and well organized and they were applauded for that. They sleep under mosquito net and I stressed on the importance for them to maintain the practice since they are closer to bush, a suitable site for breeding mosquitoes.

Her relatives were educated on the need to practice good environmental and personal health and also encouraged them to continue to keep their home and surroundings clean. I reassured her relatives of competent nursing care and that she will be well very soon. I had an extensive interaction with patient relatives and through that I was able to confirm most of the information I have been given. No identifiable factor to patient's condition was made during the visit. They thanked me and assured me that they will ensure that all what I said will be done before I come for my next home visit. I left the residency of the patient at 12:20pm and got to the hospital at 12:30pm. Comments made on the condition of the house, education and recommendations were repeated to Miss I.B. and she also promised to do everything in her power to ensure that all the recommendations are done. I identified on the first home visit that patient's house was not very far from Kwame Danso District Hospital and for that reason on my return I informed one community health nurse about handing over the patient to him.

4.3.2 Second Home Visit (19th November, 2022)

This visit was made on 19th November, 2022. I made this visit to find out how patient was doing and to see if she was following her treatment regimen and also to remind the patient of the review date which was 24th November, 2022.

On assessment patient windows were opened as they were educated to do. The environment was neat and they were commended for that. The importance of taking drugs as ordered was

reinforced to patient and family. Education on good nutrition was stressed on to help protect patient and family from any diseases.

I reminded patient of the review date which was 24th November, 2022. Patient and family were thanked for their cooperation and permission was sought to leave. I promised them of another visit which will be my last. Patient escorted me to the road side where I bordered a tricycle to my house.

4.3.3 Review (24th November, 2022)

On Thursday, 24th November, 2022, patient was met at the Out-Patient Department of Kwame Danso District Hospital at 8:00am. I helped patient to be registered into the hospitals system at the card office. The vital signs were checked and recorded as follows;

Temperature	36.5ºC
Pulse	72bpm
Respiration	22cpm
Blood pressure	120/90mmHg

Patient was attended to by the medical officer at first consulting room. Patient did make any complains. She was looking much better. She was advised not to delay in reporting to the hospital if she should encounter any health problem.

Patient was educated on the importance of good nutrition, adhering to her medications and measures to prevent crisis. Patient was assured of a third home visit. I escorted her to the entrance for her to board a tricycle home.

4.3.4 Third Home Visit (30th November, 2022)

I made my third home visit on 30th November, 2022. My main aim was to see how patient was doing at home, to see the general condition of the entire family, to reinforce on the education that had been given to them and to finally terminate care. I scheduled the visit together with the community health nurse I had previously arranged to hand over patient to her. We arrived

at the family house around 11:00am, we were welcomed, offered seats and glass of water to drink. I then went ahead to introduce the community health nurse and stated her role in helping ensure the overall health of Miss I.B. told patient and family that once I terminate my care she will be taken care of by the community health nurse with the total support of the whole family. On observation, their environment was cleaned without weeds. The windows were closed so I stressed on the need to periodically open it to allow fresh air to enter the room. I handed over patient to a community health nurse at Kwame Danso District Hospital to continue with the care. I thanked the patient and family for the opportunity they gave me to render care to Miss I.B. The patient and family also thanked me and we asked for permission to leave. We bid them goodbye and left.

CHAPTER FIVE

EVALUATION OF CARE RENDERED TO PATIENT AND FAMILY

5.0 Introduction

Evaluation in simple terms is the outcome of nursing actions against the anticipated goals and it is the final step in the nursing process, (Hinkle & Cheever, 2014).This is the last phase of the nursing process. The chapter gives information about the statement of evaluation, amendment of nursing goals and the termination of the care rendered to my patient and family.

At this stage, the nurse determines the patient's response to the nursing interventions implemented and the extent to which the objectives have been achieved. This determines the accuracy of the formulated nursing diagnosis and its related measure put in place to relieve the patient from the specific problem. Unachieved goals of nursing care plan are amended and care is terminated afterwards with conclusions made on the care rendered.

5.1 Statement of Evaluation.

Through the maximum cooperation of the patient, the mother and staff of the Hospital, patient fully recovered from her illness and was finally discharged home on the fifth day of admission. During the period of hospitalization, seven health problems were identified on patient and family in which objectives were set to solve them.

Below is the summary of the interventions carried out and to what extent the goals were met.

1. Patient normal body temperature was restored

On 12th November, 2022 at 11:00am, patient presented with high body temperature and a nursing diagnosis of Hyperthermia (39.0^{o}C) related to vessel wall occlusion by the sickled cells was made. An objective was set to help patient maintain a normal temperature (36.2^{o}C – 37.2^{o}C) within 6 hours and the following nursing interventions were then implemented; Patient was reassured that measures will be taken to bring down the temperature to normal range, Patient was sponged with tepid water and towel, leaving drops of water on the skin to be dried by evaporation, Patient was served with cold fruit juice to help reduce temperature, Patient's vital signs especially temperature was monitored 4hourly, Louvers were kept open to ensure adequate ventilation and All procedures carried out were documented.

On 12th November, 2022, at 5:00pm, the objective set at 11:00am to help patient maintain a normal temperature was evaluated and goal was fully met as temperature was checked and recorded to be 36.3^{0}C and patient verbalized that her body is not warm to touch.

2. Patient was relieved of joint pains

On 12th November, 2022, at 11:20am, because patient complained of joint pains, a nursing diagnosis of Acute pain (joints) related to intravascular sickling with localized stasis and occlusion was formulated. An objective was set to relieve patient of joint pains within 48 hours and the nursing interventions carried out were; Patient was reassured that appropriate measures will be taken to help her relieved of the pains, Patient's pain was assessed using the numerical pain rating scale (0-10) and patient scored 7, Application of warm compresses were ensured, Patient was encouraged to do range of motion exercises to prevent joint stiffness, Patient was hydrated with intravenous fluid of normal saline 500mls daily and Prescribed medication of IM Diclofenac 75mg Prn × 48 hours 10mg was administered.

On 14th November, 2022, at 11:20am, the objective set on 12th November, 2023 at 11:20am to relieve patient of joint pains was evaluated and goal was fully met as patient verbalized that she is not feeling pains anymore and nurse observed patient been relaxed in bed.

3. Patient and relatives were relieved of anxiety

On 12th November, 2022, at 11:30am, I realized patient and her relatives were anxious so a nursing diagnosis of Anxiety related to unknown outcome of disease process. An objective was set to relieved patient of anxiety throughout the period of hospitalization and nursing actions carried out were; Patient and family were reassured of the competency of the nursing care which made her trust the healthcare team for treatment, The cause, signs and symptoms, treatment and prevention of the disease condition was explained to patient and family, Patient and relatives were orientated to the ward, introduced to the staff nurses and the activities which

went on in the ward were also communicated to them, The importance of hospitalization was explained to patient and her family which made them to cooperate for the care, Each procedure to be performed was explained to patient and relatives which won their cooperation and Patient and family were allowed to ask questions and their questions were answered promptly to clear their misconceptions.

On 16th November, 2022, at 11:30am, the objective set on 13th November, 2023 at 11:30am to relieve patient and relatives of anxiety was evaluated and goal was fully met as nurse observe patient having relaxed facial expression and patient verbalised that her anxiety has subsided.

4. Patient attained and maintained adequate nutrition

On 13th November, 2022, at 9:00am, patient had loss appetite for food and a nursing diagnosis of Imbalanced nutrition (less than body requirement) related to loss of appetite was made. Objective to help patient attain and maintain adequate nutrition within 48 hours was set and nursing interventions implemented were; Patient was reassured that measures will be taken to restore adequate essential nutrients, The nutritional status of patient was assessed by observing patients eating habit and patient only eat about 1/3rd of every food served, Meals were planned with patient by taking into account her preferences, The environment was always kept neat and free from nauseated substances such as vomits, urine, stool and dirty linen, Patient was educated on the need to take in nutritionally rich diets as it helps to improve upon patient's condition and Procedure was documented in nurses' notes.

On 15th November, 2022, at 9:00am, the objective set on 13th November, 2022 at 9:00am to help patient attain and maintain adequate nutrition was evaluated and goal was fully met as nurse observed patient consuming all of the meal served and patient verbalised that she could eat well.

5. Patient regained her normal sleeping pattern

On 12th November, 2022, at 11:25am, patient verbalized that she could not sleep and a nursing diagnosis of Sleep pattern disturbance (insomnia) related to joint pains was formulated. An objective to help patient regain her normal sleeping pattern within 48hours was set and the following interventions were carried out; A complete history of patient's sleep was obtained which indicated that patient sleeps for at least 8hours normal and a daytime nap of 1-2hours, Bathing, urinating and toileting before going to bed were ensured for the patient, The ward was kept calm and conducive for sleeping, A simple warm occupied bed free from creases and cramps was made for patient for to ensure a comfortable sleep, A plan was developed for patient to sleep, that is she was to sleep for 8hours at night uninterrupted and 2hours during the day and On assessment it showed that, patient sleeps for 8hours at night and 2hours during the day.

On 14th November, 2022, at 11:25am, the objective set on 12th November, 2022 at 11:25am to help patient regain her normal sleeping pattern was evaluated and goal was fully met as patient verbalized she could sleep within few minutes of lying down and nurse observed patient sleeping comfortable in bed.

6. Patient and relatives attained adequate knowledge on sickle cell disease

On 13th November, 2022, at 9:10am, upon conversation and observation made on patient and relatives, it was realized that they lacked knowledge about the disease she was suffering from, therefore a nursing diagnosis of Knowledge deficit related to complexity of information on sickle cell disease was made. An objective was set to help patient and relatives attain adequate knowledge on sickle cell disease; causes, its treatment and prevention and nursing interventions carried out were; Patient and relatives were reassured of gaining enough knowledge on sickle cell disease causes, management and its prevention, Patient and relative's motivation and

willingness to learn was assessed by observing their level of concentration, Teaching was adjusted to the level of understanding, educational background and learning style of the patient and relatives by dividing the topic in subtopics and explaining them into details for maximum understanding before moving to the next subtopic, Good interpersonal relationship was established with patient and relatives to facilitate the learning process, Patient and relatives were educated on the clinical manifestation and prevention of sickle cell disease/crisis, Patient and relatives were encouraged to ask questions bothering their mind and answers were provided tactfully in the language they understand and Patient and her relatives correctly verbalized the causes, management, prevention and complications of sickle cell disease/crisis just as they were taught.

On 13th November, 2022, at 9:20am, the objective set on 12th November, 2023 at 9:20am to help patient attain adequate knowledge on sickle cell disease; causes, its treatment and prevention was evaluated and goal was fully met as patient and relatives demonstrated measures (not exposing patient to coldness) to reduce the occurrence of crises and nurse observed patient and relatives asking questions to seek for clarification about the condition.

5.2 Amendment of Nursing Care Plan for Partially Met and Unmet Outcome Criteria

With the support from other members of the health team and co-operation of the patient/family, all the goals set were fully achieved based on an individualized care plan. The care plan was therefore not amended.

5.2 Termination of Care

My last home visit to patient and her family was on 30th November, 2022. My main aim was to see how patient was doing at home, to see the general condition of the entire family, to reinforce on the education that had been given to them and to finally terminate care. I scheduled the visit together with the community health nurse I had previously arranged to hand over patient to her. We arrived at the family house around 11:00am, we were welcomed, offered

seats and glass of water to drink. I then went ahead to introduce the community health nurse and stated her role in helping ensure the overall health of Miss I.B. I told patient and family that once I terminate my care she will be taken care of by the community health nurse with the total support of the whole family. On observation, their environment was cleaned without weeds. The windows were closed so I stressed on the need to periodically open it to allow fresh air to enter the room. I handed over patient to a community health nurse at Kwame Danso District Hospital to continue with the care. I thanked the patient and family for the opportunity they gave me to render care to Miss I.B. The patient and family also thanked me and we asked for permission to leave. We bid them goodbye and left.

CHAPTER SIX

SUMMARY AND CONCLUSION

6.0 Introduction

Summary is a comprehensive and usually brief abstract, recapitulation, or compendium of previously stated facts or statements. Conclusion is something that you decide when you have thought about all the information connected with the situation.

This is the last step of the patient/family care study which entails the student's personal appreciation of the therapeutic relationship with the patient as well as the use of the nursing process.

6.1 Summary

Miss I.B. a 20 year old girl was admitted to the Female Medical ward through the Accident and Emergency Unit of Kwame Danso District Hospital on the 12th of November, 2022 at 11:00am with the diagnosis of vaso occlusive crisis in a known Sickle Cell. On admission, she presented with severe joint pains, high body temperature and general body weakness. Patient was

educated on sickle cell crisis and its management. Patient was also assisted in maintaining her personal hygiene, rest and sleep, nutrition, and exercises were also ensured. During Miss I.B.'s stay at the ward six health problems were identified and they were all achieved through nursing interventions such as pain assessment, intravenous hydration, application of warm compresses, checking of vital signs, providing emotional support, oral hygiene, planning of activities in order not to disturb patient, education of patient and family on condition and many more.

The following drugs were used in the treatment of the condition:

1. Injection Diclofenac 75mg start, then 75mg Prn × 48 hours
2. Intravenous Normal saline 500mls × 3 days
3. Intravenous Cefuroxime 750mg tds × 24 hours
4. Tablet Diclofenac 50mg bd × 5 days
5. Tablet Folic acid 5mg daily X 30 days
6. Tablet Fersolate 100mg tds × 30 days

Patient had the following laboratory investigations ordered and done:

1. Blood for malaria parasites
2. Blood for grouping and cross-matching
3. Full blood count
4. Blood for haemoglobin electrophoresis

On the 24th November, 2022 patient reported for review as scheduled. It was to find out that patient was adhering to the advice and all the education given to improve her health and standard of living. Three home visits were embarked on. The first home visit was done while patient was still on admission on 14th November, 2022, second home visit was on the 19th November, 2022 and third home visit was on the 30th November, 2022. The care of Miss I.B. and her family care were terminated on the30th November, 2022, during the third home visit when patient had fully recovered.

6.2 Conclusion/Recommendation

The study has equipped me with knowledge on how to care for a patient as an individual. Through this study, I have been able to put into practice actual and holistic nursing care as has been learnt theoretically. The study provided a therapeutic environment for nursing patient as an individual and has promoted a good nurse-patient (family) relationship as well as broadened my knowledge on sickle cell disease, it's prevention and management of crisis. It has also helped me to practice my skills acquired in the classroom theoretically. It has deepened my relationship with patients, families and the people in a given community as a whole. The study also provided the platform for the patient/family to receive individualized care which in turn prompts most of the community members to seek medical help at the various hospitals. This helps to redeem the image of the hospital and the staff nurses as a whole. Also this patient/family care study also helps to change the community's wrong perceptions about staff nurses and also improve the people's attendance to the hospital.

Therefore, it is my recommendation that all students are given the opportunity to embark on the patient/family care study to implement the nursing process in order to render individualized comprehensive care to patients/families. In brief, I really enjoyed every bit of writing this script despite the challenges encountered.

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APPENDIX

Date	**Time**	**Temperature (^{0}C)**	**Pulse (bpm)**	**Respiration (cpm)**
12/11/22	11:00pm	39.0	92	22
	12:00am	36.3	110	22
	06:00am	37.1	100	20
	10:00am	36.1	90	22
13/11/22	06:00am	37.1	84	21
	02:00pm	37.1	80	20
	06:00pm	36.5	92	21
	10:00pm	36.9	73	23
14/11/22	06:00am	36.3	92	22
	02:00pm	37.2	78	21
	06:00pm	36.2	80	20
	10:00pm	37.1	81	21
15/11/22	06:00am	36.7	80	20
	02:00pm	37.1	83	21
	06:00pm	36.2	82	21

	10:00pm	36.4	83	23
16/11/22	07:00am	36.0	85	21
	10:00am	37.0	82	22

SIGNATORIES

1. THE STUDENT NURSE

NAME: DANNYANSAH DORIS

SIGNATURE:.....

DATE:.....13th July, 2023.....

2. THE SUPERVISOR, HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM.

NAME: SAMUEL OSAFO ASARE

SIGNATURE:.....

DATE:.....13th July 2023.....

3. THE NURSE-IN-CHARGE OF THE FEMALE MEDICAL WARD (KWAME DANSO DISTRICT HOSPITAL)

NAME: MR. DEGBEY HOPE ELIKEM

SIGNATURE:.....

DATE:.....14/07/2023.....

5. THE PRINCIPAL, HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM.

NAME: MONICA NKRUMAH

SIGNATURE:.....

DATE:.....17TH JULY, 2023.....

PRINCIPAL
HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE
BEREKUM