

N433 Concept Map: Items to Include

I. Demographic Data

- a. Date of admission – 7/1/2021
- b. Admission Diagnosis/Chief Complaint – Neutropenia and fever / “CS has a fever”
- c. Age – 60 days old
- d. Gender - Female
- e. Allergies – No known allergies
- f. Weight in kg – 4.92 kg
- g. Psychosocial Developmental Stage - Trust vs. Mistrust
- h. Cognitive Developmental Stage - Sensorimotor

II. Medical history

- a. Previous medical history – Jaundice, anemia, neonatal hyperbilirubinemia
- b. Prior hospitalizations – CS was admitted to the PICU due to jaundice and diagnosed sepsis, hypoxia, anemia, periodic breathing (5/12/2021).
- c. Past surgical history – N/A
- d. Chronic medical issues – N/A
- e. Social needs – Mom needs to food the baby for nutrition. The caregiver was staying with her baby at the bedside.

III. Admission history

- a. Discuss why the client sought care
On July 1st, 2021, early in the morning, CS has a fever. Her caregiver checked the rectal temperature, and it was 100.4 F.
- b. What brought them to the hospital

Since the fever start, the baby's temperature does not go down. The caregiver felt that the baby was warm, but the baby was eating well and having good wet diapers. However, the temperature did not go down.

- c. How were symptoms managed prior to being admitted (or put NA if it doesn't apply, i.e., trauma)

CS's caregiver contacts the hospital to ask for help managing the baby's fever. The caregiver did not try any medicine but brought her to the hospital.

IV. Pathophysiology of chief complaint or primary medical diagnosis

- a. Disease process

Neutrophils are a type of white blood cell occupying about 40-80% of the total number of white blood cells in the blood (Capriotti, 2020). Neutrophils are at the front lines of the immune response against infection and inflammations (Capriotti, 2020). However, when there is an insufficient number of neutrophils in the blood, it called neutropenia. Many factors cause neutropenia, such as infection, medication, chemotherapy, autoimmune diseases, and deficiencies in vitamins or minerals (Cleveland Clinic, 2019). It leads to people having impaired body immune systems, and it will cause increases in body temperature and risk of infection (Capriotti, 2020).

- b. Signs/symptoms of disease

The decreased number of WBCs will increase the risk of infection. Mild neutropenia may not have symptoms, but fever, sores, swelling, and repeated infections can be occurred (Cleveland Clinic, 2019).

- c. Diagnosis of disease

Neutropenia can be diagnosed using a complete blood count (CBC). Patients with less than 1,500 neutrophils/mcL will be diagnosed with neutropenia (Capriotti, 2020). When the level is less than 1,000/mcL, moderate-to-severe neutropenia is considered (Capriotti, 2020).

d. Treatment of disease

Cleveland Clinic (2019) states that neutropenia might not need treatment; however, antibiotics are required to treat the infection if it is febrile neutropenia.

V. Lab Data

	Normal	Client's	Reason for abnormal
Meningitis panel	(-)	(-)	
Respiratory pathogens panel	(-)	(-)	
WBC	6.0-17.5	2.34	The patient diagnosed as neutropenia. It can cause by diseases of the bone marrow, bone marrow suppression, infections, medication, and autoimmune destruction of neutrophils (Capriotti, 2020).
RBC	2.7-4.5	3.01	
Hgb	9.5-13.5	8.7	Decreased hemoglobin and hematocrit levels can be an indicator of iron deficiency anemia (Capriotti, 2020). Also, low hemoglobin and hematocrit can be found in the patient with renal failure because of low erythropoietin (Capriotti, 2020). CS has a history of anemia and jaundice about two months ago, and it may occur again.
HCT	29-41	25.2	Decreased level of hemoglobin and hematocrit can be indicator of iron-deficiency anemia (Capriotti, 2020). Also, low hemoglobin and hematocrit can be found in patient with renal failure because of deficient erythropoietin (Capriotti, 2020). CS has a history of anemia and jaundice about two months ago, and it may

			occur again.
PLT	150- 450	345	

Chest x-ray

: The patient has a fever with an unknown etiology. X-rays help to find out any problems in the hearts and lungs. The patient’s heart size, lung, and chest size were normal.

VI. Current medications

	Ampicillin	Cefepime	Acetaminophen
Classification	Antibiotic	Antibiotic	Antipyretic
Reason to take	To treat the possible infection, sepsis caused by decreased white blood cells.	To treat febrile neutropenia.	To reduce fever and relieve pain.
Key nursing assessment	For IV infusion, infuse over 15 to 30 minutes. Rapid infusion may cause seizures.	Check the patient's IV site to prevent extravasation. For IV infusion, give over 30 minutes. Monitor closely for hypersensitivity reaction. Assess bowel pattern daily.	Do not exceed maximum daily limit (650 mg).

(Jones & Bartlett Learning, 2020)

VII. Physical Exam

Assessment

General	Integument	HEENT	Cardiovascular	Respiratory	Gastrointestinal	Musculoskeletal	Neurological	Most recent VS (highlight if abnormal)	Pain and Pain Scale Used
The client is alert, oriented to person, time, and place. Overall appearance normal and age-appropriate.	Skin color is appropriate for her race. Skin pink, dry, warm. Her right hand was little colder than other area due to IV insertion. No rashes, bruises, wounds detected.	Head, face, eye, nose symmetrical, no edema, redness, discoloration, oral mucosa pink.	S1, S2 noted. No gallops, murmurs, rub noted. No S3, S4 noted. Normal sinus rhythm, Peripheral pulses 2+ bilaterally palpable, Capillary refill was noted less than 3 seconds in all extremities.	Normal rate and pattern of respirations. Clear lung sounds in all lobes bilaterally, no crackles or wheezes.	Last bowel movement 7/2/21, Normal voiding, no distention, incision, mass was noted. CS's diet is mom's breast milk.	Range of motion is active and bilaterally in all extremities. Hand grips are normal bilaterally.	Equal strengths in all extremities, PERLLA, age-appropriate reflex such as grasping, sucking, and Moro reflex.	Time: 09:50 Temperature: 35.9C(96.7 F) Route: Axillary RR: 36 HR: 158 (Tachycardia, normal 80-150) BP and MAP: 97/64, 76 Oxygen saturation: 100% room air Oxygen needs: No need	rFLACC pain, level 2 Face:1, appears irritated Legs:0, normal position Activity:0, lying quietly Cry:1, occasional express complaint Consolability:0

VIII. Orders

- Pediatric feeding Q3H: Feed with mother's breast milk or formula to give nutrition for the patient
- Protective isolation: To prevent any possible infection.

- Vital sign q4H: To evaluate the effectiveness of treatment and check the patient's condition.
- Strict I/O: To measure the patient's intake and output
- Ampicillin 250mg in sodium chloride 0.9%, 33.2ml/hr, IVPB, Q6H: To treat late onset of sepsis.
- Cefepime 250 mg, 50mg/kg*5kg, 12.5ml/hr, Q8H: To treat infection
- Acetaminophen oral 73.6mg, Q4h PRN: To relieve pain and reduce the fever

IX. Nursing Diagnoses

Nursing Diagnosis 1 Risk for malnutrition related patient's condition as evidence by patient's expression.	Nursing Diagnosis 2 Acute pain related to neutropenia and possible infection as evidence by agitation, tachycardia.	Nursing Diagnosis 3 Risk for infection related to sepsis as evidence by low WBC level.
<p>Rationale</p> <p>Good and adequate nutrition is essential for an infant for their growth development and fights off the disease. CS appears irritated and occasionally grimace while breastfeeding.</p>	<p>Rationale</p> <p>The vital sign can be affected by pain level. The patient occasionally agitated, and her heart rate went high. Providing patient's comfort is one of the essential goals.</p>	<p>Rationale</p> <p>Patient has low WBC level and it increase the risk of infection.</p>
<p>Interventions</p> <p>Intervention 1: Suggest mother to breastfeed every 3 hours Intervention 2: Check I&O, and breastfeeding time</p>	<p>Interventions</p> <p>Intervention 1: Administer acetaminophen. Intervention 2: Ask the patient's mother to give the medication orally with the syringe.</p>	<p>Interventions</p> <p>Intervention 1: Protective precaution Intervention 2: Administer antibiotics as prescribed; Ampicillin and Cefepime</p>
<p>Evaluation of Interventions</p> <p>Baby girl CS sometimes express complaints at the beginning, but CS consumed her mom's breastfeeding well.</p>	<p>Evaluation of Interventions</p> <p>The pain medicine was successfully given to the patient, and she fell asleep.</p>	<p>Evaluation of Interventions</p> <p>The patient's temperature was normal, and there are no signs/symptoms of infection.</p>

(Ricci, 2021)

References

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