

CLINICAL CASE

MODELO DE CONFORT DE KATHARINE KOLCABA EN UNA PACIENTE CON LEUCEMIA MIELOIDE AGUDA(LMA): ESTUDIO DE CASO

KATHARINE KOLCABA'S COMFORT MODEL IN A PATIENT WITH ACUTE MYELOID LEUKEMIA (AML): CASE STUDY

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RESUMEN

Introducción: Las leucemias son cánceres que se origina en las células que normalmente madurarían hacia los diferentes tipos de células sanguíneas. La aplicación de modelos de valoración como los patrones funcionales de Marjory Gordon permite abordar de manera efectiva las múltiples necesidades de estos pacientes. Paciente femenina de 66 años con diagnóstico de LMA, infección pulmonar, hipertensión arterial, pancitopenia severa, síndrome anémico severo, neutropenia severa y obesidad grado II. **Materiales y Métodos:** Estudio de caso de enfoque cualitativo mediante la aplicación del proceso de atención de enfermería basado en el modelo de valoración de Marjory Gordon y las taxonomías de diagnósticos (NANDA), resultados (NOC) e intervenciones de enfermería (NIC). **Resultados:** Se identificaron tres diagnósticos de enfermería prioritarios para la paciente con LMA: síndrome de fragilidad del anciano, insomnio y riesgo de infección. Las intervenciones aplicadas utilizando las taxonomías NOC y NIC mostraron una efectividad variada, destacando mejoras significativas en el autocuidado y la gestión emocional, aunque el control del sueño y la prevención de infecciones continuaron presentando desafíos debido al entorno hospitalario y la complejidad de la condición de la paciente. **Conclusiones:** se demostró la

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efectividad de aplicar los patrones funcionales de Marjory Gordon y las taxonomías NANDA, NOC y NIC. Aunque se observaron mejoras en el autocuidado y la movilidad física mediante intervenciones personalizadas, persisten desafíos debido a la complejidad de sus condiciones crónicas y factores hospitalarios.

PALABRAS CLAVE: Cuidado de enfermería, leucemias, confort del paciente.

ABSTRACT

Introduction: Leukemias are cancers that originate in cells that would normally mature into different blood cell types. The application of assessment models such as Marjory Gordon's functional patterns allows to effectively address the multiple needs of these patients. A 66-year-old female patient with a diagnosis of AML, pulmonary infection, arterial hypertension, severe pancytopenia, severe anemic syndrome, severe neutropenia and grade II obesity. **Materials and Methods:** Qualitative case study using the nursing care process based on Marjory Gordon's assessment model and the taxonomies of diagnoses (NANDA), outcomes (NOC) and nursing interventions (NIC). **Results:** Three priority nursing diagnoses were identified for the patient with AML: frailty syndrome of the elderly, insomnia and risk of infection. Interventions applied using the NOC and NIC taxonomies showed varied effectiveness, highlighting significant improvements in self-care and emotional management, although sleep control and infection prevention continued to present challenges due to the hospital setting and the complexity of the patient's condition. **Conclusions:** The effectiveness of applying Marjory Gordon's functional patterns and NANDA, NOC and NIC taxonomies was demonstrated. Although improvements in self-care and physical mobility were observed through personalized interventions, challenges persist due to the complexity of their chronic conditions and hospital factors.

KEYWORDS: nursing care, leukemias, patient comfort.

INTRODUCTION

According to the American cancer association, Leukemias are cancers that originate in cells that would normally mature into different types of blood cells. Most often, leukemia starts in early forms of white blood cells, but some leukemias begin in other types of blood cells. There are several types of leukemia, mainly classified based on whether the leukemia is acute (fast-growing) or

chronic (slower-growing), and whether it begins in myeloid or lymphoid cells.¹

Acute myeloid leukemia (AML) begins in the bone marrow (the soft part inside certain bones where new blood cells are made), but most often quickly spreads into the blood. Sometimes it spreads to other parts of the body, including lymph nodes, liver, spleen, central nervous system

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(the brain and spinal cord), and testicles.^{1,2}

The **Nursing Care Process (NCP)** must be rigorous and tailored to the patient's individual needs, aiming to provide a comprehensive guide for evaluation, intervention, and follow-up. Using the NANDA-NOC-NIC taxonomy^(3,4,5) and Katharine Kolcaba's **Theory of Comfort**,⁶ the goal is to identify care priorities, set achievable goals, and design specific interventions for both immediate and long-term needs.

Nursing care in this context focuses not only on symptom management and medical treatments but also on patient and family education, emotional support, promotion of treatment adherence, and prevention of complications. Effective communication and coordination with other healthcare professionals are crucial to ensure comprehensive care and improve quality of life and comfort.

CASE PRESENTATION

R.A.L. is a 66-year-old female patient admitted to the internal medicine department of a Healthcare Provider Institution (IPS) in Yopal, Casanare, due to persistent symptoms of headache, dizziness, weakness, and loss of appetite over the past five days.

This clinical picture occurs in a complex health context, with a main diagnosis of acute myeloid leukemia (AML), which has required multiple previous hospitalizations due to severe anemic syndromes and dependence on blood transfusions.

Previously, R.A.L. experienced heavy vaginal bleeding, which led to a gynecological curettage and subsequently a hysterectomy due to a 14 cm uterine fibroid and ultrasound findings of a thin endometrium. In addition to AML, the patient has a significant history of morbid obesity, hepatic steatosis, splenomegaly, congestive heart failure, erosive gastritis, myelodysplastic syndrome, severe anemic syndrome (WHO 4), severe neutropenia, and asymptomatic cholecystitis.

During the initial evaluation, R.A.L. was well-oriented in person, time, and place, although generalized mucocutaneous pallor and local signs of infection were observed in the carotid and supraclavicular region following the recent insertion and removal of a central venous catheter due to complications.

The patient has completed her COVID-19 vaccination schedule and has no known drug allergies or toxic habits. Current treatment focuses on managing her severe transfusion-dependent anemia, controlling infections with appropriate antibiotics, correcting electrolyte imbalances, and providing specific care for her multiple comorbidities.

ASSESSMENT BY MARJORY GORDON'S FUNCTIONAL HEALTH PATTERNS (Altered Patterns)

1. HEALTH PERCEPTION AND MANAGEMENT

Objective:

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- History of frequent and prolonged hospitalizations since 2011
- Current diagnosis: acute myeloid leukemia
- Severe immunosuppression
- Symptoms: headache, dizziness, weakness, poor appetite
- Severe anemic syndrome
- Polytransfused patient
- Grade II obesity
- Requires constant caregiver and assistance with mobility
- Currently hospitalized for AML, pulmonary/soft tissue infection, hypertension, severe pancytopenia, severe anemic syndrome, severe neutropenia

Subjective:

- Constant worry about health and future, increasing stress and anxiety
- Expresses anguish and hopelessness about prognosis

2. NUTRITION - METABOLIC

Objective:

- Body Mass Index (BMI) over 30 kg/m² indicating obesity
- Poor appetite and constipation observed
- Asthenia and mucosal pallor noted on physical examination
- Hemoglobin level of 7.1 g/dL indicating severe anemic syndrome
- Signs of malnutrition and electrolyte imbalance

Subjective:

- Reports days without wanting to eat, wakes up without appetite and with nausea
- Avoids rice due to stomach pain and constipation
- Feels low energy most of the day

3. ELIMINATION

Objective:

- Patient has hepatic steatosis

Subjective:

- Constipation worsens when eating rice or other carbohydrates

4. ACTIVITY - EXERCISE

Objective:

- Patient has congestive heart failure
- Experiences dyspnea on minimal exertion and reduced exercise tolerance
- Dependent for physical and daily activities
- Needs support for mobility and is at risk of falling due to postural instability

Subjective:

- Reports not exercising or walking; lies or sits all day at home

5. SLEEP - REST

Objective:

- Signs of fatigue and daytime sleepiness

- Reports frequent sleep interruptions
- Needs medication to sleep (Quetiapine)

Subjective:

- Has difficulty falling and staying asleep
- Reports insomnia and non-restorative sleep with frequent awakenings

6. COGNITIVE - PERCEPTUAL

Objective:

- Mild memory impairment observed
- Signs of disorientation and altered mental status
- Neurological exams indicate cognitive deficits

Subjective:

- Concern about concentration and memory
- Reports agitation and mental confusion, especially during hospital stays

7. SELF-PERCEPTION - SELF-CONCEPT

Objective:

- Verbal expression of hopelessness and loss of interest in previously enjoyed activities
- Observed social isolation and lack of participation in group activities

Subjective:

- Feels dependent and out of control due to illness
- Expresses feelings of uselessness and low self-esteem

8. ROLE - RELATIONSHIPS

Objective & Subjective:

- Decreased quality of family and social relationships due to illness
- Feels guilty about being a burden to family
- Repeats feelings of dependency and loss of control

10. ADAPTATION AND STRESS TOLERANCE

Objective:

- Aggressive behavior observed during stressful moments
- Difficulty adapting to hospital routines and treatments

Subjective:

- Reports feelings of sadness and recurring thoughts about death

NURSING THEORY

The 66-year-old female patient presents a complex clinical history including hypertension, morbid obesity, gynecological issues such as uterine myomatosis, anemia, renal failure, hepatic steatosis, and myelodysplastic syndrome with pancytopenia.

Over the years, these health issues have required multiple interventions

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and prolonged hospitalizations, the most recent due to exacerbation of her myelodysplastic syndrome with severe pancytopenia, recurrent infections, and complications such as fever and abdominal pain.

Additionally, the patient has a significant history of genital bleeding, chronic fatigue, asthenia, adynamia, mucocutaneous pallor, and dyspnea. In this complex clinical context, **Kolcaba's Theory of Comfort** becomes a fundamental tool for guiding the nursing care plan.

Kolcaba's theory focuses on providing comfort through three types of comfort (relief, ease, and transcendence) and across four contexts (physical, psychospiritual, sociocultural, and environmental). This approach is highly applicable to the patient's situation, allowing comprehensive and personalized care that includes symptom management, emotional support, consideration of social environment, and creation of a recovery-friendly atmosphere.

Using this theory, we can identify and prioritize comfort needs in each context with the goal of improving quality of life during hospitalization.

PRIORITIZATION OF DIAGNOSES

According to **Maslow's hierarchy**, physiological needs—those critical to survival like hydration, nutrition, elimination, activity, sleep, and temperature—are considered the highest priority.

With **Kalish's model**, these physiological needs are subdivided

into survival and stimulation needs. Additionally, **Kolcaba's Comfort Theory** supports prioritization by identifying comfort in physical, psychospiritual, sociocultural, and environmental domains.

Based on these frameworks, the following diagnoses are prioritized:

Diagnosis 1: *Elderly frailty syndrome* related to deteriorating physical health, evidenced by self-care deficit, distress, hopelessness, impaired mobility, memory decline, nutritional imbalance, and chronic illnesses.

Diagnosis 2: *Insomnia* related to discomfort, evidenced by early awakening, dissatisfaction with sleep, unrestful cycles, periods of agitation and irritability.

Diagnosis 3: *Risk of infection* related to immunosuppression and prolonged hospitalization.

RESULTS

For **Diagnosis 1**, 57% effectiveness was achieved. Improvement was seen in self-care, mobility, and emotional management due to education and emotional support. However, the expected state wasn't fully achieved due to limited intervention time and chronic complexity.

For **Diagnosis 2**, 57% effectiveness was also achieved. Despite efforts to create a restful environment and promote relaxation, sleep improvements were limited by routine interruptions for medication and hospital noise.

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For **Diagnosis 3**, 47% effectiveness was achieved. Educational measures were implemented (strict hygiene practices, handwashing), but the patient's prolonged hospitalization continued to expose her to a high risk of infection.

CONCLUSIONS

The process began with an assessment based on **Marjory Gordon's functional health patterns**, identifying nursing diagnoses using the **NANDA taxonomy**. These diagnoses were prioritized based on **Maslow and Kalish's hierarchy**, ensuring a focus on basic and emotional needs, and aligned with **Kolcaba's Theory of Comfort** for a holistic approach.

The goal of setting measurable outcomes using **NOC** and performing targeted interventions using **NIC** was achieved through educational strategies and personalized care. While improvements were seen in self-care, mobility, and emotional regulation, challenges remained due to the patient's chronic condition and hospital environment.

In summary, R.A.L.'s Nursing Care Process (NCP) highlighted the critical role of education in managing complex medical conditions, integrating **Kolcaba's Comfort Theory**. This process not only fostered the development of clinical competencies but also ensured the effective application of theoretical knowledge in clinical practice, delivering high-quality, patient-centered care tailored to her specific needs.

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TYPE OF COMFORT / CONTEXT	RELIEF	EASE	TRANSCENDENCE
PHYSICAL	Myelodysplastic syndrome with severe anemia, hyporexia, dyspnea, and adynamia.	Morbid obesity impacting mobility.	Acute Myeloid Leukemia (AML): Neutropenia, anemia, risk of recurrent infections and complications.
PSYCHO-SPIRITUAL	Significant emotional impact due to critical prognosis and symptoms of depression.	Social and emotional isolation due to prolonged hospitalization and complexity of the illness.	Need for spiritual and emotional support to cope with uncertainty and adapt to the illness.
ENVIRONMENTAL	Hospital noise that interferes with rest and causes nocturnal awakenings.	Need for adaptation to the hospital environment and support in managing care.	History of frequent and prolonged hospitalizations, affecting emotional stability and quality of life.
SOCIAL	Negative impact on family dynamics and feelings of guilt for being a burden.	Social isolation and lack of participation in group and recreational activities.	Need to maintain meaningful social relationships and manage emotional burden.

Table 1 Taxonomic Structure of Comfort.



NOC RESULTS AND NIC INTERVENTIONS

Priority Diagnosis 1

NOC Evaluation Criteria	NIC Nursing Activities
<i>NOC TAXONOMY RESULT:</i> <i>KNOWLEDGE: CHRONIC ILLNESS MANAGEMENT (1847)</i> <i>Indicators (184707)</i> <i>Strategies to prevent complications (184719)</i> <i>Compliance with the therapeutic regimen (184724)</i> <i>Strategies to cope with the illness</i>	<i>Self-Care Deficit:</i> <i>Use of assistive devices for safe mobility was reinforced.</i> <i>Education was provided on skin care.</i> <i>Anxiety:</i> <i>Guidance was provided to manage stressful situations related to illness and hospitalization.</i> <i>Hopelessness:</i> <i>Messages of hope and motivation were delivered.</i> <i>Active participation in decisions related to care was encouraged.</i> <i>Improved Physical Mobility:</i> <i>Education was provided on low-impact exercises that can be done while seated.</i> <i>Preventive measures against falls were taught.</i> <i>Cognitive Stimulation:</i> <i>Use of memory games was recommended.</i> <i>Attention exercises were performed.</i> <i>Nutrition:</i> <i>Education was given to improve the intake of essential nutrients according to medical recommendations.</i> <i>Educational Management of Chronic Diseases:</i> <i>Education was provided on warning signs and the importance of strict adherence to prescribed treatment.</i>

<i>INITIAL STATE</i> <i>7/15</i>	<i>EXPECTED AND FINAL STATE</i>
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Priority Diagnosis 2

NOC Evaluation Criteria	NIC Nursing Activities
NOC TAXONOMY RESULT: SLEEP (0004) Indicators (000401) Hours of Sleep (000410) Night Awakenings (000420) Comfortable Environment	Clear information was provided on the importance of maintaining a quiet or dark environment for sleeping. The use of earplugs and sleep masks was suggested to minimize disturbances from noise and light. It was recommended to adjust the schedule of activities, such as morning baths, to be performed after 7 a.m., respecting the patient's rest time. Relaxation techniques before bedtime were promoted, such as deep breathing exercises and gentle stretching, to reduce muscle tension and discomfort. Emotional support was provided through calming conversations to reduce nighttime agitation and irritability. Scheduled rest periods were established to manage fatigue during the day.

INITIAL STATE 6/15	EXPECTED STATE 13/15	FINAL STATE 10/15
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Priority Diagnosis 3

<i>NOC Evaluation Criteria</i>	<i>NIC Nursing Activities</i>
<i>NOC TAXONOMY RESULT:</i> <i>IMMUNE STATUS (0702)</i> <i>Indicators (070201)</i> <i>Recurrent Infections (070214)</i> <i>Leukocyte Count (070202)</i> <i>Tumors</i>	<i>Educational interventions were implemented focusing on mitigating risks associated with the patient's complex condition.</i> <i>An educational approach was used to manage invasive devices and strict hygiene measures.</i> <i>The patient and their family were instructed on the importance of strictly adhering to isolation precautions, including the use of personal protective equipment.</i> <i>Understanding of early warning signs of infection, such as skin changes or persistent fever, was facilitated to promote a rapid and effective response to any signs of complications.</i> <i>The need to maintain a clean and comfortable environment within the hospital room was emphasized to minimize additional risks.</i>

<i>INITIAL STATE</i> <i>3/15</i>	<i>FINAL STATE</i> <i>5/15</i>
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