



Nursing process in a patient with a complicated, incomplete septic abortion

Proceso de enfermería en paciente con aborto séptico incompleto complicado

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ABSTRACT

Objective: To apply the nursing process to a patient diagnosed with stage I incomplete septic abortion and severe acute anemia, using Marjorie Gordon's functional health patterns methodological model. **Methodology:** A single-case study with a qualitative approach was conducted in a Venezuelan hospital. Clinical data processing and standardization were performed using the international taxonomic nomenclatures of the twelfth edition of NANDA-I, along with the NOC outcome classifications and NIC intervention classifications. **Results:** The planned interventions were fully implemented by the care team, demonstrating a positive change assessment and allowing for hemodynamic stabilization. For the diagnosis of hypovolemic shock risk, strict control of blood loss and transfusion support prevented progression to distributive failure. In the diagnosis of hyperthermia, the combination of physical and pharmacological therapy reduced the core body temperature to normal ranges (41°C to 37°C). For the diagnosis of acute pain, the change score on the Visual Analogue Scale (VAS) showed a significant decrease toward relief levels (< 4/10). **Conclusion:** The systematic application of the Nursing Process, integrating the holistic clinical assessment model, optimizes therapeutic outcomes, prevents progression to septic shock or multiple organ failure, and ensures humanized care in high-mortality gynecological and obstetric emergencies.

Keywords: nursing process, septic abortion, case study, gynecology and obstetrics, nursing care.

RESUMEN

Objetivo: Aplicar el proceso de enfermería a paciente con diagnóstico de aborto séptico incompleto grado I y anemia aguda severa empleando el modelo metodológico de los patrones funcionales de salud de Marjorie Gordon. **Metodología:** Se realizó un estudio de caso único con enfoque cualitativo realizado en un Hospital venezolano. El procesamiento y la estandarización de los datos clínicos se realizaron mediante las nomenclaturas taxonómicas internacionales de la duodécima edición de NANDA-I, junto con las clasificaciones de resultados de NOC y de intervenciones de NIC. **Resultados:** Las intervenciones planificadas fueron ejecutadas en su totalidad por el equipo de cuidado, lo que evidenció puntuaciones de cambio positivas y permitió la estabilización clínica hemodinámica. Para el diagnóstico del riesgo de shock hipovolémico, el control estricto de las pérdidas y el soporte transfusional impidieron la evolución a una falla distributiva. En el diagnóstico de hipertermia, la combinación de terapia física y farmacológica redujo la temperatura corporal central hasta rangos normales (41 °C a 37 °C). Para el diagnóstico de dolor agudo, la puntuación de cambio en la Escala Visual Analógica (EVA) demostró un descenso significativo hacia niveles de alivio (< 4/10). **Conclusión:** La aplicación sistematizada del Proceso de Enfermería integrando el modelo de valoración clínica holística optimiza los resultados terapéuticos, previene la progresión hacia shock séptico o fallo multiorgánico y asegura una práctica asistencial humanizada ante emergencias gineco-obstétricas de alta letalidad.

Palabras clave: Proceso de enfermería; aborto séptico; estudio de caso; ginecología y obstetricia; cuidados de enfermería.

INTRODUCTION

Septic abortion is among the gynecologic-obstetric emergencies with the greatest clinical severity and lethality globally, characterized by infection of the uterus and its adnexa that extends beyond the limits of the endometrium during or after pregnancy loss(1). Pathophysiologically, this condition is established due to retained products of conception acting as an ideal culture medium for polymicrobial bacterial colonization, or through the direct introduction of exogenous pathogens into the uterine cavity by non-sterile maneuvers and instruments(2). The consequent systemic inflammatory response triggers severe vasodilation, diffuse endothelial damage, and a high risk of progression to septic shock, multiple organ dysfunction, and death if early intervention is not performed(1,2).

In the gynecologic-obstetric clinical setting, nursing staff play one irreplaceable role through continuous surveillance, close hemodynamic monitoring, scientific administration of broad-spectrum antibiotic therapy regimens, fluid resuscitation, and provision of psycho-emotional support in the face of gestational grief(3). To guide these interventions with scientific rigor, the use of systematized methodologies is required(4,5). This case study was designed and structured with the purpose of applying the Nursing Process under a holistic and integrated approach in the Gynecology and Obstetrics inpatient unit of a Venezuelan hospital(6). In this sense, the following objective was proposed: To apply the nursing process to a 34-year-old female patient with a medical diagnosis of Incomplete Septic Abortion admitted to the Gynecology/Obstetrics area of a Venezuelan hospital, integrating the international taxonomies NANDA, NOC, and NIC(3-5).

METHODS

This research work was carried out under a single case study methodology with a qualitative approach. The comprehensive assessment of the patient was performed in a structured manner by applying the clinical framework of the eleven functional health patterns, which made it possible to identify the human responses and the priority biopsychosocial needs from a holistic perspective. For the technical processing of the data, ordering, and diagnostic coding, the nomenclature of the North American Nursing Diagnosis Association (NANDA-I), twelfth edition, was used (3). The planning of the goals and indicators was structured based on the Nursing Outcomes Classification (NOC) (4), while the design of the therapeutic care actions was standardized according to the Nursing Interventions Classification (NIC) (5). To apply the nursing process, the clinical case is described.

Case summary

This is a 34-year-old female patient, native of and residing in Maracay, Aragua State, single marital status and homemaker occupation, with obstetric history of multigravida (G3, P2, C2; segmental cesarean sections in 2009 and 2023). She reports the onset of her current illness approximately one month ago, characterized by active and heavy transvaginal bleeding, accompanied by unquantified febrile peaks and generalized weakness, a condition that culminates in one episode of syncope at her home. She is evaluated and admitted by the obstetric emergency department with a diagnosis of Incomplete Septic Abortion (gestational age calculated at 13 weeks and 2 days by ultrasound) associated with a clinical picture of sepsis of uterine origin and Severe Acute Anemia. During the first 24 hours of hospitalization, she urgently required transfusion administration of 2 units of packed red blood cells and performance of an emergency Instrumental Uterine Curettage (LUI).

To the nursing assessment (Current shift):

Patient in the supine position, conscious, oriented to time, place, and person, exhibiting facies of severe pain, extreme fatigue, and marked nervousness regarding the scheduling of a reintervention by Manual Endouterine Aspiration (AMEU). On segmental physical examination, accentuated mucocutaneous pallor is evident, with skin markedly warm to the touch and diaphoretic. Abdomen soft, depressible, intensely painful on palpation in the hypogastric region. On gynecological inspection, persistence of active transvaginal bleeding with discharge of fetid lochia is confirmed. In the right upper limb, a local hematoma is observed due to leakage from a previous venous access, with a patent line in the opposite limb for the administration of fluid therapy and infusions.

Vital Signs:

- Body temperature: 41 °C
- Respiratory Rate (RR): 55 rpm (Severe tachypnea)
- Heart Rate (HR): 95 bpm

- Pulse: 98 ppm
- Blood pressure (BP): 110/40 mmHg
- Laboratory tests:
 - Hemoglobin (Hgb): 5.16 g/dL (Severe Anemia)
 - Hematocrit (Hct): 16 %
 - Leukocytes: 9,600 cells/mm³
 - Neutrophils: 60 % | Lymphocytes: 40 %
 - Monocytes: 0% (relative elevation in inflammatory context)
 - Platelets: 215,000 cells/mm³
 - C-Reactive Protein (CRP): 25 mg/dL (elevated, marker of sepsis)
 - ESR (Wintrobe): 47 mm at the 1st hour (elevated)
- Active Pharmacological Treatment:
 - 0.9% saline solution 500 cc IV for maintenance + oxytocin 20 IU
 - Ceftriaxone 1 g IV every 12 hours
 - Clindamycin 900 mg IV every 12 hours
 - Gentamicin 80 mg IV every 12 hours
 - Ranitidine 50 mg IV every 12 hours
 - Ketoprofen 100 mg IV every 8 hours / SOS for pain

RESULTS

Results of nursing assessment by functional patterns

- Pattern I: Health management and perception: Patient reports prior unawareness of the pregnancy and states that she delayed seeking specialized medical care at the hospital center due to fear, initially resorting to empirical self-medication with oral antibiotics at home upon noticing the first complications.
- Pattern II: Nutritional-metabolic: The patient presents a critical alteration characterized by an extreme elevation of central body temperature (41 °C), diaphoresis, and pallor of mucous membranes and skin surface secondary to the acute bacterial infectious condition and to blood loss.
- Pattern III: Elimination: Constant and abundant loss of blood content and necrotic tissue remnants through the external genitalia (active uterine hemorrhage) is observed, with lochia exhibiting fetid characteristics.
- Pattern IV: Activity and exercise: Marked evidence of intolerance to usual physical activity and functional disability due to generalized weakness, severe anemia, and altered respiratory pattern (tachypnea of 55 rpm); requires family and staff assistance for bed mobilization and transfers.
- Pattern V: Sleep-rest: Patient reports being unable to achieve restorative and continuous sleep, reporting generalized fatigue due to persistent hypogastric pain and generalized discomfort derived from the clinical environment.
- Pattern VI: Cognitive-perceptual: She appears oriented, but verbally and through nonverbal behaviors (facial expression of distress, suppressed crying, and irritability) manifests acute pain of strong intensity located in the hypogastrium, rated on the EVA scale as 8/10, which increases on clinical palpation.
- Pattern VII: Self-perception-self-concept: Patient expresses a high state of anxiety, emotional lability, and feelings of vulnerability, accentuated by concern for her physical integrity and fear of the scheduled complementary curettage (AMEU).
- Pattern IX: Sexuality-reproduction: History of incomplete abortion at 13.2 weeks of gestation complicated by initial septic shock; patient reports not having used family planning methods or regular contraceptives in the last period.
- Pattern X: Stress adaptation-tolerance: Verbalizes persistent distress and an explicit desire to leave the hospital institution ("I want to go home") as an ineffective coping mechanism in response to the stress of the invasive surgical environment.
- Pattern XI: Values-Beliefs: The patient reports that she professes the Christian faith, using it as spiritual support during her hospitalization.

Prioritization of nursing diagnoses

1. Acute pain (00132) related to biological and physical injurious agents (endometrial infection, postabortion uterine contractions, and retained products) evidenced by the patient's verbal

- report, visual analog scale (VAS) indicating severe intensity, and painful facies(3).
2. Hyperthermia (00007) related to a generalized infectious process (sepsis of uterine origin due to septic abortion) evidenced by a central body temperature of 41 °C, tachypnea of 55 rpm, and skin warm to the touch(3).
 3. Fluid volume deficit (00027) related to active blood loss (heavy transvaginal bleeding) evidenced by critical hemoglobin levels (5.16 g/dL), hematocrit of 16 %, syncope, and compensatory tachycardia(3).
 4. Risk of hypovolemic shock (00205) related to massive and persistent uterine blood loss(3).
 5. Fear (00148) related to imminent invasive procedures in the operating room (AMEU) and the severity of her health status evidenced by verbal expressions of distress and anxious facies (3).
 6. Disturbed sleep pattern (00198) related to persistent acute pain, general malaise, and hospital environment stimuli as evidenced by weakness and tired facies(3).

DISCUSSION

Regarding the first prioritized diagnosis, acute pain related to biological and physical injurious agents (infectious process and uterine contractions), the findings of this case are fully consistent with the regional literature. The patient presented severe hypogastric pain (EVA 8/10) in the context of a septic abortion, which is consistent with the clinical description reported by Faneite et al., who indicate that hypogastric pain is a typical symptom in these patients.(5) This finding is also consistent with the study by Chumbe, Távara, and Rodríguez in Peru, where 100% of the 1088 analyzed cases of septic abortion presented endometritis, an infection of the uterine cavity that generates intense pain.(6)

Pain management with intravenous ketoprofen aligns with international guidelines that recommend a multimodal approach. However, a point of interest arises when comparing with the Venezuelan study by Faneite and colleagues, where the main treatment was the combination of antibiotics and curettage in 94.64% of cases, which suggests that pain control is part of comprehensive management but not the main focus in the region, where interventions to eradicate the infectious focus predominate.(5)

Regarding the diagnosis of hyperthermia, a temperature of 41 °C and tachypnea of 55 rpm represented an extreme biological response. These signs are classic and fully consistent with the Latin American literature. Faneite and colleagues describe in their introduction that patients with septic abortion typically present with hyperthermia, chills, and malodorous vaginal discharge, findings that are consistent with the present case.(5) Likewise, Chumbe, Távara, and Rodríguez report that 100% of septic abortions in their study presented with endometritis, which underscores the infectious basis of hyperthermia in this pathology.(6)

The nursing intervention with physical measures and the triple-combination antibiotic regimen successfully reduced the temperature within 4 hours. This approach is consistent with the recommendations of international manuals. However, the study by Faneite et al. provides a divergent point of great regional relevance, as they found a maternal mortality of 2.38% (4 deaths in 168 cases of septic abortion) in a hospital in Venezuela, indicating that, despite treatment, lethality remains significant in the region.(5) The rapid response in our case underscores the importance of early action, a critical aspect in contexts where access to care may be limited, as noted by the Colombian study by Mena et al.(7).

Finally, the management of fluid volume deficit and the consequent risk of hypovolemic shock emerged as a critical component. With a hemoglobin level of 5.16 g/dL, the hemodynamic reserve was severely limited. This finding is fully consistent with the study by Faneite and colleagues, in which anemia was the main morbidity in 71.16% of the cases of septic abortion analyzed in Venezuela.(5) This indicates that 133 of the 168 patients in the study had anemia, which positions this complication as a central problem in the regional management of septic abortion.

The study by Chumbe, Távara, and Rodríguez in Peru provides another relevant point of convergence: it reports that 14.4% of cases had extensive lesions and 10% required hysterectomy, demonstrating the severity of the infection and the need for aggressive surgical interventions.(6) In contrast, in our case, stabilization and resolution through curettage and AMEU were successful without requiring hysterectomy, highlighting the effectiveness of a timely, less aggressive intervention when early control of the septic focus is achieved, as suggested by Chumbe's work on the AMEU technique.(8-11)

CONCLUSIONS

The conduct of this clinical case study, methodologically aligned with current editorial scientific guidelines, conclusively demonstrated that the systematic application of the Nursing Process constitutes a fundamental tool for ensuring high-quality and safe care in obstetric patients with high-risk acute infectious pathologies. Through assessment using functional health patterns, the patient's actual and potential problems were accurately identified and prioritized.

The applied NIC nursing interventions resulted in favorable change scores in the patient's clinical course: a reduction in critical hyperthermia from 41 °C to a stable normothermic state (37 °C) was achieved; acute hypogastric pain was reduced by lowering the Visual Analog Scale (VAS) score to comfortable levels (< 4/10); hemodynamic stability was maintained by mitigating the latent risk of hypovolemic shock through transfusion support and strict fluid control; and the impact of preoperative fear and anxiety was reduced through the therapeutic helping relationship. It is concluded that timely clinical judgment, the scientific foundation of care, and humanized care are determinant factors for reducing morbidity and mortality in complex gynecological emergencies.

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CONFLICT OF INTEREST

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