



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

El aborto séptico constituye una de las emergencias gineco-obstétricas de mayor gravedad clínica y letalidad a nivel global, caracterizada por una infección uterina y de sus anexos que sobrepasa los límites del endometrio durante o después de la pérdida de la gestación (1). Fisiopatológicamente, esta condición se instaura debido a la retención de restos ovulares que actúan como medio de cultivo ideal para la colonización bacteriana polimicrobiana, o mediante la introducción directa de patógenos exógenos en la cavidad uterina por maniobras e instrumental no estériles (2). La respuesta inflamatoria sistémica consecuente desencadena vasodilatación severa, daño endotelial difuso y un alto riesgo de progresión a shock séptico, disfunción orgánica múltiple y muerte si no se interviene precozmente (1,2).

In the gynecological-obstetric clinical setting, nursing staff play an irreplaceable role through continuous surveillance, close hemodynamic monitoring, scientific administration of broad-spectrum antibiotic therapy regimens, fluid resuscitation, and provision of psychoemotional support for gestational grief (3). To guide these interventions with scientific rigor, the use of systematized methodologies is required (4,5). The present case study was designed and structured with the purpose of applying the Nursing Process under a holistic and integrated approach in the hospitalization unit of Gynecology and Obstetrics of a Venezuelan hospital (6). In this sense, the following objective was proposed: To apply the nursing process to one 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

The present research work was carried out under the 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 11 functional health patterns, which allowed identifying the human responses and 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 goals and indicators was structured based on the Nursing Outcomes Classification (NOC) (4), while the design of 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, born and residing in Maracay, Aragua State, single, occupation homemaker, with obstetric history of multigravity (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 abundant transvaginal bleeding, accompanied by unquantified febrile peaks and generalized weakness, a condition culminating in one episode of syncope at her home. She was evaluated and admitted through the obstetric emergency department with the 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 the transfusional administration of 2 units of packed red blood cells and the performance of an emergency Instrumental Uterine Curettage (LUI).

On nursing assessment for the current shift, the patient is in a supine position, conscious, oriented to time, place, and person, and exhibits a facies of severe pain, extreme fatigue, and marked nervousness regarding the scheduling of a reintervention by Manual Vacuum Aspiration (AMEU). On segmental physical examination, marked cutaneomucosal pallor is evident, and the skin is markedly warm to the touch and diaphoretic. The abdomen is soft and depressible but intensely painful on palpation in the hypogastric region. Gynecological inspection reveals persistent active transvaginal bleeding with discharge of foul-smelling lochia. In the right upper limb, a local hematoma is observed due to leakage from previous venous access, while a patent line in the opposite limb is maintained for the administration of fluid therapy and infusions.

Vital Signs:

- Body temperature: 41 °C
- Respiratory rate (FR): 55 rpm (severe tachypnea)
- Heart rate (FC): 95 lpm

- Pulse: 98 bpm
- Blood pressure (TA): 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 an inflammatory context)
 - Platelets: 215,000 cells/mm³
 - C-Reactive Protein (CRP): 25 mg/dL (elevated, sepsis marker)
 - ESR (Wintrobe): 47 mm at the 1st hour (elevated)
- Active Pharmacological Treatment:
 - Saline solution 0.9% 500 cc EV for maintenance + oxytocin 20 UI
 - 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 the nursing assessment by functional patterns

- The patient reports prior unawareness of the pregnancy and states that she delayed seeking specialized medical care at the hospital out of fear, initially resorting to empirical self-medication with oral antibiotics at home upon noticing the first complications.
- The patient presents a critical alteration characterized by extreme elevation of central body temperature (41 °C), diaphoresis, pallor of mucous membranes and skin surface, secondary to the acute bacterial infectious condition and blood loss.
- Pattern III: Elimination: A constant and abundant loss of hematic content and necrotic tissue debris through the external genitalia (active uterine hemorrhage) is observed, with fetid lochia.
- The patient presents marked evidence of intolerance to habitual physical activity and functional incapacity due to generalized weakness, severe anemia, and altered respiratory pattern (tachypnea of 55 rpm); she requires family and staff assistance for bed mobility and transfers.
- The patient reports the inability to achieve restorative and continuous sleep, expressing generalized fatigue due to persistent hypogastric pain and general discomfort derived from the clinical environment.
- The patient is oriented but manifests, verbally and through non-verbal behaviors (facies of anguish, suppressed crying, and irritability), acute pain of strong intensity localized in the hypogastrium, rated as 8/10 on the EVA scale, which increases on clinical palpation.
- The 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).
- History of an episode of incomplete abortion at 13.2 weeks of gestation complicated by initial septic shock; she reports not having used family planning methods or regular contraceptives during the recent period.
- The patient verbalizes persistent distress and explicit wishes to leave the hospital ("I want to go home") as an ineffective coping mechanism in response to the stress of the invasive surgical environment.
- The patient reports professing 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, post-abortion uterine contractions and retained products) evidenced by the patient's verbal report, visual analog scale (VAS) of strong intensity, and painful facies (3).
2. Hyperthermia (00007) related to generalized infectious process (sepsis of uterine origin due

to septic abortion) evidenced by core 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 (abundant transvaginal hemorrhage) evidenced by critical hemoglobin levels (5.16 g/dL), hematocrit 16%, syncope, and compensatory tachycardia (3).
4. Risk for hypovolemic shock (00205) related to massive and persistent uterine blood losses (3).
5. Fear (00148) related to imminent invasive procedures in the operating room (AMEU) and severity of her health status, evidenced by verbal expressions of distress and anxious facies (3).
6. Impaired sleep pattern (00198) related to persistent acute pain, general malaise, and hospital environment stimuli evidenced by weakness and tired facies (3).

DISCUSSION

In relation to 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, consistent with the clinical description reported by Faneite and collaborators, who indicated 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, in which 100% of the 1088 cases of septic abortion analyzed 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 comparison with the Venezuelan study by Faneite and collaborators raises an interesting point: the main treatment in that study was the combination of antibiotics and curettage in 94.64% of cases, suggesting that pain control is part of comprehensive management but not the main focus in that region, where interventions to eradicate the infectious focus prevail. (5)

Regarding the diagnosis of hyperthermia, the 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 collaborators describe in their introduction that the patient with septic abortion typically presents with hyperthermia, chills, and foul-smelling vaginal discharge, findings that converge with this case (5). Likewise, Chumbe, Távara, and Rodríguez report that 100% of the septic abortions in their study presented endometritis, which underscores the infectious basis of hyperthermia in this pathology (6).

The nursing intervention using physical means and the triple antibiotic regimen successfully decreased the temperature within 4 hours. This approach is consistent with the recommendations of international manuals. However, a divergent and highly regionally relevant point is provided by Faneite and collaborators, who reported 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 in the Colombian study by Mena and collaborators (7).

Finally, the management of fluid volume deficit and the consequent risk of hypovolemic shock emerged as a critical pillar. With a hemoglobin level of 5.16 g/dL, the hemodynamic reserve was extremely limited. This finding is fully consistent with the study by Faneite and collaborators, in which anemia was the main morbidity, affecting 71.16% of the septic abortion cases analyzed in Venezuela (5). This means that 133 of the 168 patients in the study presented anemia, making this complication 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 presented 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 manual vacuum aspiration (AMEU) were successful without resorting to hysterectomy, which highlights the effectiveness of a timely and less aggressive intervention when early control of the septic focus is achieved, as suggested by Chumbe's work on the AMEU technique (8).

CONCLUSIONS

The execution of the present clinical case study, methodologically adapted to current editorial scientific guidelines, conclusively demonstrated that the systematic application of the Nursing Process constitutes the fundamental tool for guaranteeing high-quality and safe care in obstetric patients with acute high-risk infectious pathologies (6). Through assessment by functional health patterns, the patient's real and potential problems were accurately identified and prioritized.

The applied NIC nursing interventions resulted in highly positive change scores in the patient's clinical evolution: critical hyperthermia was reduced from 41 °C to a stable normothermic state (37 °C); acute hypogastric pain was mitigated, decreasing the EVA scale score to significant comfort levels (< 4/10); hemodynamic stability was maintained by counteracting the latent risk of hypovolemic shock through transfusion support and strict fluid control; and the impact of fear and preoperative anxiety was reduced through the therapeutic helping relationship (3-5). It is concluded that timely clinical judgment, the scientific foundation of care, and humanized attention are determining factors in reducing morbidity and mortality in complex gynecological emergencies.

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CONFLICT OF INTEREST

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