Short Communication

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Review of Literature on Puerperal Sepsis

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Abstract

Puerperal sepsis is an infection of the genital tract that arises between the onset of labor or membrane rupture and up to 42 days after childbirth. It is characterized by the presence of two or more of the following symptoms: pelvic pain, fever (a temperature of ≥38.5°C at least once), abnormal vaginal discharge, or a delayed rate of uterine involution.[1]

Background: Puerperal sepsis is a significant contributor to maternal illness and death related to pregnancy, particularly in developing nations. This condition is defined as a bacterial infection of the genital tract occurring within 28 days following childbirth, miscarriage, or induced abortion. Common sites of postpartum infections include the endometrium (endometritis), surgical wounds from cesarean sections or episiotomies, the urinary tract, and the breasts (mastitis).

Puerperal infection is diagnosed when the patient presents with a fever of 100.4°F (≥38°C) or higher on two consecutive days within the first 10 days postpartum, measured orally at least 4 hours apart. However, healthcare providers should note that an elevated temperature in the first 24 hours post-delivery may result from the body's normal physiological response to labor and delivery stress.

Cesarean deliveries are associated with a higher risk of puerperal infections compared to vaginal births, particularly when prolonged labor precedes the surgery. In such cases, the incidence of postpartum infections can rise to 30-35%. Since many infections develop after hospital discharge, it is crucial for nurses to educate mothers and their families about recognizing and reporting symptoms of infection to a healthcare provider promptly.[2]

Aim: To prevent maternal deaths and long-term morbidity by early identification and management of puerperal sepsis[3]

Objectives: The study aimed to assess the prevalence of puerperal sepsis and identify the factors associated with its occurrence.[4]

Material: The uterus is typically a sterile environment. However, bacteria naturally present on the skin, such as *Streptococcus* or *Staphylococcus*, and other microorganisms can cause infections by entering through damaged skin or tissue. These bacteria flourish in the warm and moist conditions of the lower abdomen.

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Postpartum infections can originate in the uterus after the rupture of the amniotic sac "water breaking". Furthermore, the uterus is at risk of infection if the amniotic sac and its fluid become contaminated. The amniotic sac is a protective membrane that encloses the fetus and the surrounding fluid.[5]

Result: The prevalence of puerperal sepsis was found to be 10.7%. The average age of the patients was 25.85 ± 7.5 years, with a mean parity of 3.89 ± 4.5. A majority of the women (74.71%) had not attended antenatal care ("unbooked") and delivered at home (69.3%). Fever was the most common presenting symptom, reported by 90.7% of the patients. *Staphylococcus aureus* was the most frequently cultured organism, identified in 75.0% of cases. Anemia was the most prevalent complication, affecting 63.6% of the women.[6]

Conclusion: The incidence of puerperal sepsis was 7.27%. Factors associated with its occurrence included a lack of formal education, cesarean delivery, premature rupture of membranes, complicated pregnancies, referral status, and the absence of a birth preparedness and complication readiness plan.[7]

Keywords: Puerperal sepsis; Cesarean sections; Episiotomy; Labor.

INTRODUCTION

Puerperal sepsis, also known as postpartum sepsis, is a serious bacterial infection of the genital tract that occurs after childbirth, miscarriage, or abortion. It is a leading cause of maternal morbidity and mortality worldwide, particularly in low-resource settings where access to quality healthcare is limited. This condition is typically diagnosed within the first 42 days postpartum and can arise from poor hygiene, delayed medical intervention, or complications during labor and delivery.

The infection usually begins in the uterus, spreading from the site of placental attachment or through open wounds caused by delivery procedures. Common risk factors include prolonged labor, premature rupture of membranes, cesarean sections, and the use of unsterile instruments during delivery. Key pathogens involved are *Streptococcus pyogenes*, *Staphylococcus aureus*, and *Escherichia coli*.

Clinically, puerperal sepsis presents with symptoms such as fever, pelvic pain, abnormal vaginal discharge, and delayed uterine involution. If left untreated, the infection can progress rapidly, leading to systemic complications like septic shock and multi-organ failure.

Preventive measures include ensuring clean and safe delivery practices, timely management of obstetric complications, and education on postpartum care. Early detection and treatment with broad-spectrum antibiotics and supportive care are crucial to improving outcomes and reducing maternal deaths associated with puerperal sepsis.[8]

DISCUSSION

Puerperal sepsis remains a critical public health issue, particularly in low-resource settings where it significantly contributes to maternal morbidity and mortality. Despite advancements in obstetric care, factors such as inadequate antenatal care, unskilled home deliveries, poor hygiene, and limited healthcare access increase susceptibility. The infection, often caused by bacteria like Staphylococcus aureus and Escherichia coli, typically begins in the genital tract and can spread systemically, leading to severe complications such as septic shock or multi-organ failure if untreated. Early symptoms include fever, pelvic pain, and abnormal vaginal discharge, while severe cases may present with systemic signs like hypotension and altered mental status. Effective management relies on prompt antibiotic therapy, supportive care, and surgical interventions when necessary. Prevention through skilled delivery, aseptic practices, and public health education is key to reducing the incidence and improving maternal outcomes, particularly in vulnerable regions.[9]

CONCLUSION

The incidence of puerperal sepsis was 7.27%. Factors associated with an increased risk of developing puerperal sepsis included lack of formal education, cesarean delivery, premature rupture

of membranes, complicated pregnancies, referral status, and the absence of a birth preparedness and complication readiness plan.[10]

Conflict of Intestate

Recent studies have highlighted key clinical factors that significantly increase the risk of puerperal infection. Women of low socioeconomic status who undergo cesarean sections, particularly those with prolonged labor and rupture of membranes (ROM), face a 40 to 85% risk of developing endometritis. In contrast, infection occurs in less than 10% of women delivering vaginally, even with complications like prolonged ROM, and the incidence is often much lower. Other factors such as internal monitoring, obesity, anemia, and general anesthesia have not been consistently identified as major risk factors in recent studies.[11]

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