

Prevalence of puerperal sepsis in Jos University Teaching Hospital from 2007-2010

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Abstract

Background: A 4-year retrospective study to determine the prevalence of puerperal sepsis in post-partum women in Jos University Teaching Hospital, Plateau State, Nigeria between 2007 and 2010 was conducted. Case files containing detailed of clinical records of every woman that delivered or admitted in (JUTH) between 2007 and 2010 were used for this study. Six thousand seven hundred and forty five (6,745) pregnant women visited JUTH for delivery during the four-year period of this study (2007-2010).

Result: The overall prevalence of the disease within the study period was 56 (0.83%). Prevalence of the disease was highest [27 (48.2%)] in the age bracket of 26-35 years, followed by 21 (37.5%) within the age range of 15-25 and the least [8 (14.3%)] was recorded between the ages of 36-45. The highest

cases of the disease was recorded from parity 1-3 which had 31 (55.4%) cases of puerperal sepsis, followed by parity 4-6 [13 (25.0%)] while 7-9 had the least [11 (19.6%)]. A case fatality rate of 8.9% was recorded during the period of study.

Conclusion: Puerperal sepsis has a high case fatality rate and hence needs to be prevented. Therefore, the need for public education and strict adherence to hygiene among pregnant/post-partum women and health personnel is advocated.

Key words: puerperium, sepsis, prevalence.

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Introduction

Puerperal sepsis is the infection of the genital tract during puerperium. Puerperal sepsis significantly contributes to maternal morbidity and mortality in our >environment¹. Mortality statistic has shown that puerperal sepsis is posing a serious threat to human health in post parturient women¹. The disease has demonstrated the capacity to cause high morbidity and mortality in pregnant women all over the world including Nigeria. Several countries of the world have recorded widespread devastation due to mortality caused by the disease at different times. Mortality is highest in developing countries such as: Brazil (86 deaths in 2004), South Africa (46 deaths), and Egypt (39 deaths), while developed countries like United State of America, Germany, Spain and Japan have less than 6 deaths in the same year¹. This ugly trend in puerperal sepsis assumed a tremendous improvement, particularly when home delivery practice changed to delivery in lying-in hospital, as there still was a total ignorance of asepsis². Post-partum sepsis comprises of a wide range of entities that can occur after vaginal, caesarean deliveries or during breastfeeding. Trauma sustained during the birth process or caesarean

procedure and also physiologic changes during pregnancy contributes to the development of puerperal sepsis³. This sepsis being contagious in nature from outside to inside hence need for personal hygiene⁴.

The disease which is an infection of the genital tract following child birth is still a major cause of maternal death when it is undetected or untreated⁵.

We therefore sought to find out the frequency of puerperal sepsis, age and parity level mainly affected in cases recorded in JUTH

Methodology of Study

Study Area

The study was conducted in Jos University Teaching Hospital; it is a tertiary institution that offers health care services to the people in Plateau, Kaduna, Bauchi, Nassarawa, Benue and Taraba states. It also acts as a referral centre as it is the only tertiary health institution in the state.

Target Population

The target populations in this study are women who delivered in JUTH and those that were admitted into post-natal ward with puerperal sepsis.

Sample and Sampling Technique

Case files containing detailed of clinical records of every woman that delivered or admitted in JUTH with puerperal sepsis between 2007 and 2010 were used for this study.

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Method of Data Collection

Records from post- natal ward were used for data collection.

Statistical Analysis

Data was analysed using percentage and results presented in tables.

Ethical Consideration

Principle of confidentiality was applied in this study, the information so retrieved will not be disclosed, neither will the identity of the clients.

Results

There were a total of Six thousand seven hundred and forty five (6,745) deliveries during the study period (2007-2010). Of this number 56 (0.83%) were diagnosed of puerperal sepsis. The highest number of cases 16 (0.88%) was in 2007, followed by 11 (0.60%) in 2010, while 9 (0.62) was the least (Table 1). The booking status indicated that out of the 56 cases of puerperal sepsis recorded, only 18 (32.14%) of the pregnant women received regular ante-natal care while 38 (67.85%) did not.

Table 1: Distribution of puerperal sepsis by year

Year	Number of pregnant women	Cases of puerperal Sepsis	% of Puerperal sepsis
2007	1826	16	0.88
2008	1634	10	0.61
2009	1452	9	0.62
2010	1833	11	0.60
Total	6,745	56	0.83

Table 2: Age distribution of cases of puerperal sepsis

Age range	Cases of puerperal Sepsis	% of puerperal sepsis
15-25	21	37.5
26-35	27	48.2
36-45	8	14.3
Total	56	100

Prevalence of puerperal sepsis was highest 27 (48.2%) among women aged 26-35 years, followed by 21 (37.5%) among women aged 15-25 and the least 8 (14.3%) was recorded group aged 36-45. The result also showed that parity 1-3 had more [31 (55.4%)] cases of puerperal cases, followed by parity 4-6 [13 (25.0%)], while 7-9 had the least [11(19.6%)] (Table3). Five women died from the

disease giving a case fatality rate of 8.9% during the period of study.

Table 3: Distribution of cases of puerperal sepsis according to parity

Parity	Cases of puerperal Sepsis	% of puerperal sepsis
1-3	31	55.4
4-6	14	25.0
7-9	11	19.6
Total	56	100

Discussion

Puerperal sepsis is one of the leading causes of maternal morbidity and mortality in both developed and underdeveloped countries⁷. In the present study, a prevalence of 0.83% was recorded which is rather low compared to previous studies in the country by other workers, even though lower rates of puerperal sepsis have been reported in West Africa, as low as 0.09%⁸. Our finding varies significantly with the report that documented a prevalence rate of 3.7% in Jos University Teaching Hospital⁹. In a similar study conducted in Ilorin, the prevalence rate of puerperal sepsis was reported to be 56.1%¹⁰.

Puerperal sepsis was found to be the fourth leading cause of maternal deaths in Anambra State of Nigeria with a prevalence rate of 12.1%¹¹. In a similar study conducted on obstructed labor in Gombe State, Nigeria, puerperal sepsis was found to be the most frequent cause of maternal morbidity reference. The low prevalence rate recorded in our study could possibly be due to improved awareness on personal hygiene of pregnant women, health personnel and an improved hygiene in the hospital environment. Early detection of illness, prompt antibiotic medication coupled with good surgical techniques could have also accounted for the low prevalence rate. Despite the fact that low prevalence of puerperal sepsis was reported in the current study, it is important to note that the continuous occurrence of this disease in Nigeria is a reflection that puerperal sepsis is still a very serious public health problem that needs to be tackled with all the desired attention.

We observed that the prevalence was highest in 2007 and decreased with increase in years. This could be attributed to good hygiene and health education. Cases of puerperal sepsis was rather low [18 (32.14%)] in pregnant women that attended regular antenatal care and high [38 (67.85%)] in those that did not. This finding has highlighted that attending regular ante-natal care and good medical attention are some of the viable ways of curtailing the predisposing factors or conditions leading

to the development of puerperal sepsis. The role of antenatal care in the reduction of puerperal sepsis cannot be over-emphasized, because during this period of care, it is possible to identify some of the conditions that could lead to the development of puerperal sepsis. In most cases unbooked pregnant women usually present at the hospital when their life is endangered by advanced pregnancy complications. In keeping with our findings which is worthy of note is that the absence of good antenatal and hospital delivery usually leads to a high incidence of maternal morbidity and mortality^{12,13}. The socio-economic status of some pregnant women is one of the major hindrances that prevent them from attending ante-natal clinic. The poverty rate in Nigeria has increased and many Nigerians live below poverty line¹⁴. The obvious implication of this is that many pregnant women will resort to attending sub-standard or unregistered clinics and home deliveries in order to cut down cost. If the current trend of decline in economic fortune in Nigeria is not curtailed, then it is most likely that the prevailing cases of puerperal sepsis in Jos University Hospital will continue unabated.

Cases of puerperal sepsis were more in parity 1-3 (55.4%) this could be linked to primiparity, prolonged rupture of membranes, multiple vaginal examinations, prolonged labour and obstetrical manoeuvres since their reproductive anatomical structure are not well adapted to the passage fetuses as compared to parity 4-9⁷.

Puerperal sepsis has been shown to have a very high case fatality rate. In this study, we recorded case fatality rate of 8.9%. 'Incidence and Case Fatality Rates' in West Africa looking at severe maternal morbidity from direct obstetric causes, showed sepsis to have a case fatality rate of 33.3%⁸.

Conclusion

Health education especially on the area of personal hygiene should be emphasized. Proper antenatal care should be instituted when women come to labour, aseptic technique should be paramount in delivery of women. For unbooked cases, health practitioners should treat them with utmost care as potential cases of puerperal sepsis.

Recommendations

Considering the morbidity and mortality rate of puerperal sepsis in Nigeria and JUTH in particular, efforts should be made by the Government and the health practitioners to prevent its occurrence. This could be achieved by the following:

The Government should compel all unregistered clinics that conduct delivery as part of their services, to register and operate based on recommended standards.

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