ISSN: 2641-6247
DOI: 10.33552/WJGWH.2022.05.000621
World Journal of Gynecology & Women's Health
Iris Publishers

Research Article

Management of Postpartum Endometritis in N'Djamena Mother and Child University Hospital

Gabkika Bray Madoué[1,2]*, Saleh Abdelsalam[1], Diarra Drissa[3], Abdou Yaya Ali[1] and Foumsou Lhagadang[1,2]

[1]*N'Djamena Faculty of Human Health Sciences, Chad*

[2]*N'Djamena Mother and Child University Hospital, Chad*

[3]*Gabriel Touré University Hospital Centre, Chad*

***Corresponding author:** Gabkika Bray Madoué, Department of Gynecology and Obstetrics, N'Djamena Mother and Child University Hospital, Chad.

Received Date: February 25, 2022

Published Date: March 10, 2022

Abstract

Introduction: Postpartum endometritis is a dreaded infection because it puts at risk the immediate vital prognosis of the mother and the subsequent obstetrical prognosis.

Objective: Contribute to the management of postpartum endometritis.

Patients and Method: This was a prospective descriptive study for six months from December 1st, 2020 to May 31st, 2021 on the management of postpartum endometritis at N'Djamena Mother and Child University Hospital. We included in the study all patients admitted for postpartum endometritis who consented to participate in the study. The data were processed using SPSS version 18.0 software.

Results: We recorded 52 cases of postpartum endometritis among1878 admissions, giving a frequency of 2.7%. The age group 15 to 19 years was the most represented with 26.9%. Thirty-two patients (62.7%) were self-referred. In this series, 69.2% of the patients had delivered in a hospital and 67.3% of the patients had delivered vaginally. The most reported risk factor was wearing a non-sterile pad (25%). Endometritis occurred in 53.8% within > 7 days. Fever was noted in 71.2%. Abdominopelvic pain was reported in 92.3%. We noted in 88.5% that the uterus was not retracted. Lochia was fetid in 98.1%. Antibiotic therapy was instituted in all patients. Oxytocin was the most frequently used uterotonic with 86.5% and paracetamol was the most frequently used analgesic with 48.1% (n=25). We noted one maternal death (1.9%).

Conclusion: Postpartum endometritis is the most frequent infectious complication of the postpartum period.

Keywords: Post-partum endometritis; Maternity hospital CHUME N'Djamena

Introduction

Postpartum endometritis is an infection of the uterine lining occurring within 42 days of delivery [1]. It is one of the puerperal infections that are reported to be the second most common cause of maternal death worldwide and the most common form of postpartum infection [2,3].

It is a dreaded infection because it puts at risk the immediate vital prognosis of the mother and the subsequent obstetrical prognosis through the serious complications that it is likely to cause [4].

In developing countries, where it is the obstetrician's greatest fear, its incidence is always high and varies according to the mode of delivery and socio-economic conditions. It is estimated at 1 to 3% in the case of vaginal delivery and 15 to 20% in the case of delivery by the upper tract or caesarean section [5].

Indeed, the very precarious hygiene and working conditions in our health structures predispose to the outbreak and persistence of these infections. If clinical diagnosis does not pose a real problem, microbiological diagnosis, which is necessary for the management

of patients, is delicate and rarely done given the poor socio-economic situation in our developing countries.

In Chad, few series have dealt with this subject. It therefore seemed necessary to us to carry out this work with the aim of contributing to the management of postpartum endometritis

Patients and Method

This was a prospective descriptive study that lasted six (6) months from December 1, 2020 to May 31, 2021 on the management of postpartum endometritis at the Mother and Child University Hospital of N'Djamena.

We included in the study all patients admitted to the gynecology-obstetrics department of the CHU de la Mère et de l'Enfant for postpartum endometritis and having consented to participate in the study.

We proceeded with an exhaustive recruitment of all patients meeting the inclusion criteria. This was done using a pre-established questionnaire filled out with data from clinical examinations, paraclinical examinations, medical records and elements provided by the interrogation. The variables studied were epidemiological, clinical and prognostic. Data collection and analysis were performed using SPSS version 18.0 (Statistical Package for Social Sciences 18.0).

Results

Frequency

During the study period, 52 cases of postpartum endometritis were recorded out of 1878 admissions to the department, representing a frequency of 2.7%.

Age

The 15 to 19 age group was the most represented with 26.9%. The average age was 24.5 ± 6.36 years with extremes of 15 and 40 years (Table 1).

Table 1: Distribution of patients according to age.

Age (year)	n	%
15-19	14	26.9
20-24	12	23
25-29	8	15.3
30-34	12	23,0
35-39	3	5.7
> 40	3	5.7
Total	52	100

Origin

Thirty-six patients (69.2%) came from urban areas, compared with 16 (30.8%) from rural areas.

Marital status

Married women represented 92.2% of the cases (n=.)

Mode of admission

Thirty-two patients (62.7%) were self-referred compared to twenty patients (37.3%) referred.

Parity

Primiparous females were the most represented with 40.4% (n=21) followed by multiparous and pauciparous females with 28.8% (n=15) and 25% (n=13) respectively. The average parity was 3.0 ± 2.48 with extremes of 1 and 10 (Table 2).

Pregnancy follow-up

Pregnancies were monitored in 57.70% (n=30) compared to 22 (42.3%) not monitored.

Table 2: Distribution of patients according to parity.

Parité	n	%
Primipara	21	40.4
Paucipara	13	25
Multipara	15	28.8
Grande multipara	3	5.8
Total	52	100

Place of delivery

Table 3: Distribution of patients according to place of delivery.

Lieu	n	%
Hospital	36	69.2
Health center	7	13.5
Home	9	17.3
Total	52	100

In this series, 69.2% of the patients had given birth in a hospital (Table 3).

Mode of delivery

The mode of delivery was vaginal in 67.3% (n=35) and caesarean in 32.7% (n=17).

The vaginal delivery was non-instrumental in 80% (n=28).

Risk factors

Patients with no risk factors accounted for 44.23%. The most reported risk factor was wearing non-sterile pads (25%) (Table 4).

Table 4: Distribution of endometritis according to risk factors.

Risk factors	n	%
premature rupture of membranes	2	3.84
Repeated vaginal exam	8	15.38
Placental retention	6	11.54
Non-sterile packing port	13	25

Management of prescribed medication after delivery

¾ (n=39) of the patients had complied with the prescribed prescriptions after delivery.

Time to onset of endometritis in the postpartum period

Endometritis had occurred in 53.8% (n=28) within > 7 days. Seventeen patients (32.7%) had presented with endometritis within 3-7 days.

Clinical data

Fever was noted in 71.2% (n=37) of patients. Abdominopelvic pain was reported in 92.3% (n=48).

We noted in 88.5% (n=46) of cases that the uterus was not retracted. The lochiae were fetid in 98.1% of cases (n=51).

Para-clinical exam

Patients with a hemoglobin level between 6 and 8g/dl represented 32.6% (n=17). Eight patients (15.3%) had a hemoglobin level < 5g/dl.

The majority of patients had a white blood cell count above 14,000/mm, which was 82.6% (n=43). CRP was positive in 47.9% (n=25).

Treatment

Antibiotic therapy was instituted in all patients. The combination of betalactamine-aminoside-imidazole was the most frequently used with a proportion of 69.2% (n=36). This was followed by ceftriaxone + imidazole in 30.8% (n=16).

Syntocinon was the most commonly used uterotonic with 86.5% (n=45). Six patients had used methergin (11.5%). The combination oxytocin-ethergin was used in 1 case (1.9%).

Paracetamol was the most frequently used analgesic with a proportion of 48.1% (n=25). Diclofenac was used in 42.3%. The combination of paracetamol + diclofenac was used in 5 cases (9.6%).

Evolution

The evolution of endometritis under treatment was favorable in 98.1% of cases (n=51). We noted one maternal death (1.9%).

Duration of hospitalization

The average length of hospital stay was 7.35 days +/- 3.16 days with extremes of 1 and 20 days. Half of the patients had a hospital stay of 6-10 days (Table 5).

Table 5: Distribution of patients according to Duration of hospitalization.

Duration of Hospitalisation (Day)	n	%
< à 5	15	28,8
6-10	26	50,0
11-15	6	11,5

16-20	4	7,6
Sup. à 20	1	1,9
Total	52	100

Discussion

Epidemiological data

The incidence of postpartum endometritis in this series was 2.7%. This result is close to that of Ouédraogo, et al. [6] in 2016 in Ouagadougou (Burkina Faso) which is 2.8%. However, it is lower than that of Ngozi J, et al. [7] in 2018 in Uganda who reported a rate of 39%.

These data show that postpartum endometritis remains a real public health problem affecting mostly developing countries and testifies to the level of the health system in our countries.

With regard to age, we reported an average age of 24.5 years +/- 6.3 years with a predominance of the 15 to 19-year-old age group with 26.9%. This result is comparable to that found by Ouédraogo, et al. [6] who noted an average age of 25.2 years with a predominance of the 21 to 30 age group in 57.8% of cases. However, it is lower than those reported by Tchaou BA, et al. [8] in Parakou (Benin) in 2015 and Kehila M, et al. [9] in 2016 in Tunisia, who respectively obtained mean ages of 26.2 and 28.4 years. This result can be explained by the fact that this period corresponds to the one when genital activity is the most increased, with pregnancy and childbirth as a corollary.

Early motherhood and multiparity favored by poverty could explain the occurrence of postpartum endometritis in developing countries.

Some authors [6,8] consider this young age to be a risk factor for obstetrical complications and therefore for maternal mortality and morbidity. This is confirmed in our work where 49.9% of the patients were under 25 years of age.

In terms of origin, most of the patients (69.2%) were from urban areas. This rate is similar to those of Ouédraogo, et al. [6] in 2016 and Dukar [10] in 2018 in Rabah (Morocco) who found respectively 56.5% and 70.2%. This high rate of urban patients can be explained by the fact that the study was conducted in N'Djamena and that the CHU de la Mère et de l'Enfant is the reference hospital for maternal health.

Patients of rural origin represented 30.8% in this study. This rate is similar to those of Dukar [10] and Ouédraogo, et al. [6] who reported that 29.7% and 43.5% of patients came from rural areas respectively. The significant proportion of patients from rural areas reflects the lack of access to basic care for this category of the population after discharge from hospital.

According to the marital status, we noted that most of the patients were married (92.2%). This result is close to that of Ngozi, et al. [7] in 2018 Uganda who observed a proportion of 82.7% of married women. It is higher than that of Ouédraogo, et al. who found 63.7% of married women.

These results could be explained by the fact that in Africa, particularly in Chad, birth outside marriage is not tolerated by many tribes and religions.

Considering parity, we recorded 40.4% of primiparous women. This rate is lower than that of Kehila, et al. [9] in 2016 who noted 56.4% of primiparous women. It is lower than that of Dukar [10] in 2018 who obtained a rate of 33.2%.

The average parity was 3.06 +/- 2.48 with extremes ranging from [1 to 10]. This result is slightly higher than that of Ouédraogo, et al [6] and M. Kehila, et al. [9], who respectively found an average parity of 1.7% +/- 0.9 and 2.5. These results could explain the strong demographic growth in our developing countries in general and Chad in particular, with a total fertility rate of 6.3.

With regard to pregnancy monitoring, we noted that 42.3% of patients had not had their pregnancy monitored. This result is similar to that of Dukar [10] who points out that in 44.3% of cases the pregnancy was not monitored. This high proportion of women who did not follow up their pregnancy can be attributed to cultural factors such as low level of education and low socio-economic status, all of which are known to limit the practice of antenatal care.

Clinical aspects

Speaking of risk factors, we reported that 32.6% of patients had undergone a caesarean section. This rate is close to that of Ngozi, et al. [7] which is 38%. It is lower than that of Tchaou, et al. [8] who obtained 46.6% delivery by caesarean section. Several factors could explain this result such as the quality of sterilization of materials in our operating theatres, the quality of post-operative care, the quality of the surgical wound dressing, the intrapartum hygiene of patients and the low socio-economic status.

According to the mode of admission, we noted that most patients were not referred (62.7%). This result differs from those of Ouédraogo, et al. [6] and Traoré [11] who reported 21.6% and 25% of patients who came on their own respectively.

This result could be explained by the fact that the policy of free emergency care is more perceived at the level of the University Hospital of Mother and Child (CHU-ME). The second reason would be that it is the only reference center for reproductive health.

Considering the reason for consultation, we noted that 92.3% of patients consulted for pelvic pain. This result is higher than that of Ouédraogo. et al. who report pelvic pain in the order of 77.4%.

Apart from pelvic pain, we noted that 71.2% had presented with hyperthermia. This rate is lower than that of Ngozi, et al. [10] and Ouédraogo, et al. [6] who found hyperthermia in 99% and 98.3% of cases respectively.

These results could be explained by the fact that pain and fever are signs that are not tolerated by the patients and can cause distress, forcing them to consult a health facility.

On physical examination, we found foul-smelling and purulent lochia in 51 cases (98.1%), pain on uterine palpation and pelvic defense in 48 cases (88.5%). These results are close to those of Ouédraogo et al. [6] who report provoked uterine pain in 99.1%, malodorous and purulent lochia in 89.2%, pelvic defense in 75.5% and poor uterine involution in 73.3%. These results confirm the clinical diagnosis of postpartum endometritis reported by the authors.

According to the time of onset of endometritis, we observed that the symptomatology appeared in the aftermath of the delivery in 53.8% of cases. This result is comparable to that of Traoré [11] who reported a delay of more than 7 days in 50% of cases. However, it is different from that of Ouédraogo. et al. [6] who noted a delay of 3 to 7 days in 51% of cases. These results could be explained by the fact that basic hygiene was not observed by the patients once they were discharged from hospital and the important use of non-sterile pads (traditional pads) in our countries by the women giving birth due to their low socio-economic level.

The second reason remains attributable to factors such as premature rupture of membranes and prolonged labor, both of which are recognized as risk factors for postpartum endometritis.

Therapeutic and prognostic aspects

Triple antibiotic therapy combining β-lactam + aminoglycoside + imidazole was the most commonly used treatment in this series (69.2%). This result differs from Ouédraogo, et al. [6] who used triple antibiotic therapy (β-lactam + aminoside + imidazole) in 23.5% of cases. It is superior to that of Coulibaly [44] in Bamako, Mali in 2018 who reports the use of triple antibiotic therapy β-lactamine + aminoside +imidazole in 54% of cases.

The choice of antibiotic therapy remains dependent on the multi-microbial character of the endometritis on the one hand and on the other hand by the experience of each team.

Paracetamol was the most commonly used analgesic in this study with 48.1% and oxytocin was used in 88.5%. This therapy is linked to the desire to promote uterine involution on the one hand and on the other to promote good uterine retraction preventing the spread of germs.

Considering the length of hospitalization, we noted an average length of hospitalization of 7.35 days with extremes ranging from 1 to 20 days. This result is similar to that of Ouédraogo, et al. [6] who found an average length of stay of 6.3 days with extremes ranging from 1 to 33 days. On the other hand, it is different from Tchaou, et al. [8] who observed an average duration of 4.0 +/- 3.4 days. This length of hospitalization is linked to the clinical condition of the patients. Severe forms will require a long hospital stay, hence these results.

With regard to maternal mortality, we reported a case fatality rate of 1.9%. This result is superimposed on that of Traoré who found 1%. It is lower than that of Ouédraogo, et al. [6] who obtained a case fatality rate of 2.9%.

Conclusion

The management of post-partum endometritis is part of the activities at the CHUME. The patients are mostly young, married, not in school, come from urban areas for the most part and have a poorly monitored pregnancy. Management is based on a combination of antibiotics. Based on this study, prevention is based on the quality of prenatal consultation and clean delivery.

Acknowledgement

None.

Conflict of Interest

Authors declare no conflict of interest.

References

1. WHO. Trends in Maternal Mortality: 1990 to 2015.
2. Robert M ,Jean L, Jean M (2001) Précis d'Obstétrique. (6th edn), Paris: Paris Masson.
3. Lamy C, Juilly S, Perdriolle E, Gauchotte E, Villeroy-de-Galhau S, et al. (2012) Prise en charge des infections du post-partum. Journal de Gynécologie Obstétrique et Biologie de La Reproduction (Paris) 41(8): 886-903.
4. Garcia JLA, Damian RF, Ibarra FJO, Gonzalez IES (1993) Endometritis etiology: Diagnosis and treatment experience of the institutonacional de perinatologia. Current Therapeutic Research 54: 529-539.
5. Marzouki I (2019) Les infections post-césariennes (Thesis: medicine), Rabah: University of Rabah.
6. Ouédraogo CMR, Ouattara A, Sana A, Ouédraogo A, Kain DP, et al. (2016) Les endométrites obstétricales au CHU-Yalgado Ouédraogo de Ouagadougou (Burkina Faso). À propos de la prise en charge d'une série de 102 cas. Bulletin de La Société de Pathologie Exotique 109: 334-339.
7. Ngonzi J, Bebell LM, Fajardo Y, Boatin AA, Siedner MJ, et al. (2018) Incidence of postpartum infection, outcomes and associated risk factors at Mbarara regional referral hospital in Uganda. BMC Pregnancy Childbirth 18(1): 270.
8. Tchaou BA, Hounkponou NFM, Salifou K, Zoumenou E, Chobli M (2015) Les urgences obstetricales a l'hopital universitaire de parakou au Bénin: aspects cliniques, therapeutiques et evolutifs. European Scientific Journal 11(9): 260-272.
9. Kehila M, Magdoud K, Touhami O, Abouda HS, Jeridi S, et al. (2016) Early postpartum discharge: outcomes and risk factors for rehospitalization. Pan Afr Med J 24: 189.
10. Ed-Dukar H (2018) Evaluation of the quality of care of postpartum parturients. (Thesis: medicine), Rabah: Mohamed V University of Rabat (Morocco).
11. Traoré SM (2021) Infectious complications of caesarean section at the reference health center of the commune VI. (Thesis: medicine), Bamako: University of Bamako.