Scientific Research Publishing

Open Journal of Obstetrics and Gynecology, 2025, 15(1), 87-96
https://www.scirp.org/journal/ojog
ISSN Online: 2160-8806
ISSN Print: 2160-8792

Epidemiologic and Clinical Profile of Abortion in Two Reference Hospitals in Yaoundé in 2023

Madye Ange Ngo-Dingom[1,2*], Félix Essiben[3], Karène Maffeu Moumbe[3], Henri Léonard Mol[3], Wilfried Loïc Meukem Tatsipie[3], Clifford Ebong Ebontane[3], Pascale Mpono Emenguele[3], Véronique Mboua Batoum[3], Claude Hector Mbia[3], Merlin Boten[4], Jean Marie Alima[1], Diane Estelle Kamdem Modjo[1], Jovanny Fouogue Tsuala[1], Pascal Foumane[1]

[1]Department of Obstetrics and Gynaecology, Faculty of Medicine and Pharmaceutical Sciences, University of Dschang, Dschang, Cameroon
[2]Yaoundé Central Hospital, Yaoundé, Cameroon
[3]Department of Obstetrics and Gynaecology, Faculty of Medicine and Biomedical Sciences, University of Yaoundé I, Yaoundé, Cameroon
[4]Department of Clinical Sciences, Faculty of Health Sciences, University of Bamenda, Bamenda, Cameroon
Email: *dingommadye@gmail.com

How to cite this paper: Ngo-Dingom, M.A., Essiben, F., Moumbe, K.M., Mol, H.L., Tatsipie, W.L.M., Ebontane, C.E., Emenguele, P.M., Batoum, V.M., Mbia, C.H., Boten, M., Alima, J.M., Modjo, D.E.K., Tsuala, J.F. and Foumane, P. (2025) Epidemiologic and Clinical Profile of Abortion in Two Reference Hospitals in Yaoundé in 2023. *Open Journal of Obstetrics and Gynecology*, **15**, 87-96.
https://doi.org/10.4236/ojog.2025.151009

Received: December 12, 2024
Accepted: January 13, 2025
Published: January 16, 2025

Abstract

Abortion is one of the leading causes of maternal death in Cameroon, despite numerous policies and strategies put in place to reduce it by 2030.This study aims to describe the epidemiologic aspects of abortions within hospitals in the city of Yaoundé in 2023. **Methods:** This was a descriptive cross-sectional study with prospective data collection in the maternity wards of the Yaoundé Gynaeco-Obstetric and Paediatric Hospital, and the Yaoundé Central Hospital for 7 months, from the 1st of November 2022 to the 31st of May 2023. The variables studied were demographic and clinical characteristics, means of recourse and post-abortion contraception. The frequency of abortions was calculated as the ratio of the number of abortions to the number of deliveries. The calculation of numbers and frequencies was used to describe the study population, and to highlight the sociodemographic and clinical characteristics of the patients recruited. Quantitative variables were expressed as mean ± standard deviation. Data were collected numerically and classified according to type, then analyzed using Epi-info version 7.2 software. Microsoft Office Excel 2013 was used to produce figures and tables. **Results:** During the study period, 169 patients were selected out of 1882 patients who had consulted for gynaecological emergencies; but only 164 of them accepted to participate. The frequency of abortions was 9.6% (169/1882). The age group of 25 to 29 years was the most represented, with 29.3% (48/164). They were mainly single 76.2% (125/164), and housewives 33.5% (55/164). The notion of previous abortion

was found in 30.5% (50/164) of them. Approximately 19.5% of patients (32/164) reported to have conceived while using contraception, 56.2% of whom (18/32) used male condoms. At the time of admission to the emergency unit, the predominant symptom was bleeding in 70.7% of cases. The abortions were mainly spontaneous, in 75% of cases (123/164). In cases of induced abortions, 24.4% (10/41) of them took place after 14 weeks. Unexpected pregnancy was the main reason for termination in 46.3% of cases (19/41). Regarding induced abortion, 58.54% (24/41) of them resorted to voluntary medical termination. The mortality rate was 1.2%. The acceptability rate of a modern contraceptive method before discharge was 31.7%. **Conclusion:** Although frequent in our environment, data relating to abortion remain under-evaluated. Abortions occur mainly among young, single women, with a still very high proportion of induced abortions. The acceptability of post-abortion contraception remains poor. Prevention of unwanted pregnancies and risk factors is necessary to reduce the burden of abortions in low-income countries.

Keywords

Abortion, Epidemiology, Hospital, Yaoundé

1. Introduction

Abortion is the oldest method of birth control and its use is not only a family planning issue; it also highlights the recognition of women's sexuality, delivering before getting married is poorly perceived in African setting, and the difficulty of accessing means of preventing these unplanned pregnancies remains a challenge [1].

According to WHO, abortion is the expulsion of a product of conception before 22 weeks from the first day of the last normal menstrual period. When the gestational age is unknown, abortion is defined as the expulsion of a product of conception weighing less than 500 g [1]. WHO estimates that each year in the world 585,000 women die from complications related to pregnancy, childbirth, postpartum and abortion (the latter accounting for 13% of maternal deaths) [2].

Each year, 4.7% - 13.2% of maternal deaths can be attributed to an unsafe abortion. In developed regions, it is estimated that for every 100,000 unsafe abortions, 30 women die. In developing countries, this number rises to 220 deaths for every 100,000 unsafe abortions. According to 2012 estimation, in those countries alone, 7 million women per year were hospitalised for complications from an unsafe abortion [3]. This makes it a major public health problem for which any intervention would contribute to strengthening the country's level of development.

Unwanted pregnancies are the main cause of abortion in the world and particularly in Africa where childbirth is culturally not well tolerated [4]. Poverty, lack of education and low prevalence of contraception greatly contributed to worsen

the burden of unwanted pregnancies.

In Africa, the incidence of abortion was estimated at approximately 8.3 million between 2010 and 2014 [5]. In the sub-Saharan Africa, social norms force women to abort as the only option to avoid pregnancies that compromise their future and purposeful marriage [6]. In Cameroon, nearly two out of five inhabitants live below the national poverty level, in this climate of economic precariousness, abortions represent 24.2% (25% - 30%) of maternal deaths [7]. According to the Cameroon Ministry of Public Health's 2022 measurement report on family planning (FP 2030) indicators, the total number of modern contraceptive users between 2012 and 2022 rises from 840,000 to 1,280,000. During the same period, contraceptive prevalence rises from 16.9% to 19%. The use of modern contraceptive methods has prevented almost 150,000 unplanned pregnancies.

In Cameroon abortion policies are prohibitive according to law n˚2016/007 of July 12, 2016 of the penal code, and abortions that take place in an illegal setting are responsible for a particularly high lethality rate.

In a study carried out by Foumane *et al.* in 2015, septic abortion was responsible for 17.2% of maternal deaths [8]. In order to update figures to assess the evolution, we studied the epidemiologic data on abortions in 2023 in two health facilities in Yaoundé. We aimed to know the real figures of this scourge to date, and improve the strategies implemented in the prevention of abortions in order to reduce the heavy burden on society caused by them.

2. Patients and Methods

This was a descriptive cross-sectional study with prospective data collection carried out at the Yaoundé Central Hospital (YCH) and the Yaoundé Gynaeco-Obstetric and Paediatric Hospital (YGOPH) over a period of 07 months from the 1st of November 2022 to the 31st of May 2023. The choice of these two hospitals was motivated by the fact that pregnant women attend at least 3500 emergency consultations per year in those health facilities. In addition, they are reference hospitals, in the second category of Cameroon's health system pyramid. It focused on all pregnant women who came to consult for bleeding and/or pelvic pain before 22 weeks of amenorrhea. The study population was made up of women received in these two maternity wards presenting with per vaginal bleeding and/or pelvic pain in context of amenorrhea. Only patients admitted for abortion in one of these maternities and consenting to participate in the study were included. They were approached as soon as they were admitted to the emergency room and to the hospitalisation rooms. The data were collected from medical records and admission records. The variables studied were grouped into demographic, clinical, reproductive characteristics and variables relating to abortion complications. Descriptive statistics (frequencies, percentages, means and standard deviation) were used to describe the study population, and highlight its sociodemographic and clinical characteristics. Data analysis was done using Epi info software version 7.2.5.0 and Microsoft Excel 2016.

3. Results

3.1. Frequency of Abortions

From the 1st of November 2022 to the 31st of May 2023, 169 cases of abortions were recorded for 1882 emergency consultations, giving an abortion frequency of 9.6%.

3.2. Sociodemographic Characteristics of the Study Population

The average age of the patients was 27.98 ± 6.8 years with a range from 14 to 45 years. The most represented age group was 25 to 29 years (29.3%). Those single made up 3/4 of this population (75%). More than half (54.9%) had studied up to higher education. Moreover, 55 of them were housewives (33.5%) (Table 1).

Table 1. Sociodemographic data.

Variables	Number (n)	Frequency (%)
Age groups (N = 164)		
[14 - 19]	23	14
[20 - 24]	32	19.5
[25 - 29]	48	29.3
[30 - 34]	31	18.9
[35 - 39]	24	14.6
[40 - 45]	6	3.7
Marital status (N = 164)		
Single	125	76.2
Married	39	23.8
Level of education (N = 164)		
Primary	4	2.4
Secondary	70	42.7
Higher	90	54.9
Occupation (N = 164)		
Pupil	26	15.8
Student	24	14.6
Private sector	25	15.2
Civil servant	14	8.5
Housewife	55	33.5
Informal sector	20	12.2

3.3. Clinical Characteristics

Concerning clinical data, multigravidas represented 44.6% of the study population, the average number of pregnancies was 3.2 ± 2.2 (range: 1 - 11). However, there were nulliparous women (38.4%) with an average number of previous term deliveries of 1.6 ± 1.3. The average gestational age at the time of termination of pregnancy was 12 ± 4 weeks of amenorrhea. Among these patients, less than a third (30.5%) had a history of abortion with an average of 1.9 ± 1.2 abortions (range: 1 - 5). In this population, 19.5% of patients reported having conceived under contraception, with the male condom as the most incriminated method in 56.2% of cases. Per-vaginal bleeding was the most common reason for admission (70.7%).

3.4. Mode of Occurrence and Reasons for Recourse to Abortion

Nearly 75% of these abortions were spontaneous according to the patients. Regarding the induced forms, the fear of an unwanted pregnancy (46.3%) followed by the parent's fear (21.9%) were the main reasons for recourse to abortion. In addition, the initial diagnosis of incomplete abortion was made in 70.7% of the patients.

3.5. Complications of Abortions

Complicated forms were found in 75 of them (40.2%) with 44 in the group of spontaneous miscarriages and 31 in the group of voluntary terminations of pregnancy. The main complication was anaemia in 40.2% of cases. Two deaths (1.2%) were recorded among those who had undergone voluntary termination of pregnancy. This outcome resulted on the one hand from complications of genital bleeding and on the other hand from infection following intrauterine manoeuvers (Figure 1).

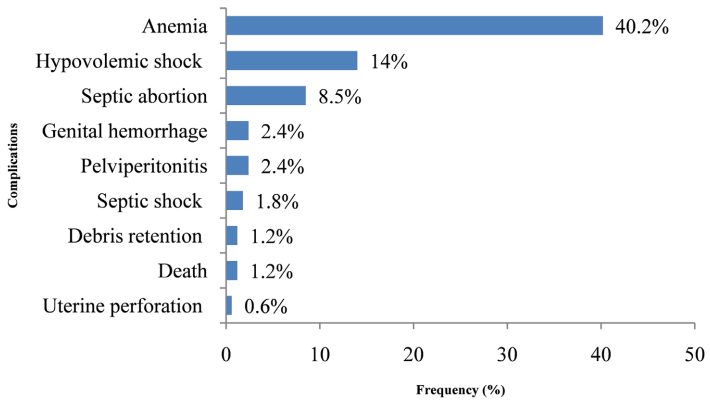

Figure 1. Type of complications (N = 75).

3.6. Post-Abortion Management and Contraception

Concerning emergency management, 96 patients (58.5%) benefited from uterine emptying by manual intra-uterine aspiration. However, for 2.1% of them, were

managed by emergency laparotomy. After the implementation of medical measures, approximately 88.9% of patients benefited from post-abortion care (range: 60.4% - 100%). Only 31.7% of participants decided to use modern method of contraception before leaving the health facility (Table 2). Of the remaining 112, 16% were formally opposed to the use of modern methods of contraception.

Table 2. Distribution of participants according to the chosen contraceptive methods (N = 52).

Variables	Number (n)	Frequency (%)
Adopted family planning	52	31.7
Subcutaneous implant	31	59.6
Intrauterine device	12	23.1
Male condom	5	9.6
Depo Provera	2	3.8
Combined oral contraceptive	2	3.8

4. Discussion

4.1. Epidemiological Aspects

The frequency of abortions was 9.6%, higher than 6.9% found by Ajavon *et al.* [9] in 2018 in Togo. This difference may be due to the fact that contraceptive prevalence differs from one region of Africa to another. Indeed, contraceptive prevalence was 24% in Togo compared to 19% in Cameroon. However, Cameroon has made enormous financial commitments since 2014 around family planning, and among its objectives, an increase in contraceptive prevalence of 35% in 2030 constitutes the main target to be achieved. This low use of modern methods of contraception would expose to unwanted pregnancies, abortions and their complications [10]. However, 19.5% of patients reported having conceived under contraceptive methods. This finding is in line with the scientific literature, as Barjot *et al.* described cases of conception under oral contraceptive, with the main reasons being patient forgetfulness and stopping due to side effects which were mainly nausea and vomiting [11]. Three cases of pregnancy under contraceptive implant based on etonogestrel without identified risk factors have been described in the literature [12]. In view of these factual data, abortion could be seen as the response to poorly met needs for contraception by desiring women, or as the response to the failure of contraception among proven users. The average age of patients was 27.9 ± 6.8 years, similar to the result of Kamga *et al.* [7] who found an average age of 27.98 ± 6 years. This is a period of peak fertility per excellence in Cameroon according to Tebeu *et al.* [13]. Singles (74.4%), with a university education level (54.9%) were mainly concerned, in accordance with the results of Kamga *et al.* in 2017 [7] who mostly found singles (75%) with a secondary education level (62.5%) within his study population. The social and economic vulnerability of these

groups could be a factor of exposure to unwanted pregnancies [14]. On the other hand, the study of Ajavon *et al.* in Togo in 2018 on the management of incomplete abortions in the first trimester at the CHR of Kara revealed that married patients (67.6%) and housewives (35.1%) were the most affected.

4.2. Clinical Aspects

Bleeding (70.7%) was the main reason for consultation in the emergency room. This is consistent with the results of Fouedjio *et al.* [15] where bleeding was also found in 80% of cases. Bleeding and pelvic pain were the main symptoms of abortions, whether spontaneous or induced [16]. Spontaneous abortions represented 75% of the cases in our study, a result higher than that of Kamga *et al.* in 2017 who found 60% of cases of induced abortions [7]. Furthermore, 70.7% of abortions were incomplete, in accordance with the findings of Ajavon *et al.* [9] who reported 86% of incomplete abortions. During our study, the patients' statements were the only source of information we had to classify the participants in a group, moreover in a context where abortion is illegal, patients with induced abortions only go to the hospital in the event of complications [17].

4.3. Reasons for Resorting to Abortion

The main reason for the patients' refusal to keep the pregnancy was the unwanted nature of the latter (46.3%), which is consistent with the study of Fouedjio *et al.* [15] in which the main reasons were the unwanted nature of the pregnancy and/or the concern for birth spacing (62.5%). Unwanted pregnancy was also the reason given by patients (44.4%) in a study conducted by Mwetaminwa *et al.* [18] in 2018 in the Democratic Republic of Congo. These results further highlight the extent of the non-satisfaction of contraceptive needs in our society.

Fear of parental reaction (21.9%) and disagreement/separation from partner (4.8%) were also found among the reasons for abortion. In a society where talking about sexuality with one's young daughter is taboo, the issues of premarital sexuality and indirectly abortion are not discussed within the family, so abortion may be quickly considered in the event of an unwanted pregnancy [19]. In Africa, married women believe that they need their husbands' approval to use contraception, and very often their husbands will not consider returning to condom use once they have stopped; a wife's insistence may be perceived as proof of infidelity [19]. As a result, many women categorically refuse to use a contraceptive method, exposing themselves to the consequences of unwanted pregnancy.

4.4. Post-Abortion Contraception

A method of contraception had been established in 52 patients (31.7%), a result lower than those of Fouedjio *et al.* in Yaoundé in 2019 [15] with 40.9% of users in urban areas and Kubaya *et al.* in Congo in 2023 with 40.3% of users in a rural area [20]. Although family planning has a high impact in reducing maternal mortality, many women do not adhere to it despite effective awareness-raising. Some would

be opposed to the use of modern methods of contraception for fear of side effects, others for socio-cultural reasons in favour of natural methods of contraception [21]. To remove barriers to the use of contraception, we opted during the study to emphasize awareness-raising and communication with the various parties to listen and, above all, despite fears about contraception. Setting up mobile units is an important option if we are to reach the largest possible target group, as the problem of contraception is primarily a societal one [19].

5. Study Limitations

We encountered a number of limitations in this study, not the least of which was the difficulty in classifying certain participants according to the mode of occurrence, since the only arguments available were the patients' own statements or some data from the physical examination. In addition, the illegal nature of abortion limited the number of cases induced, hence the lack of detailed explanations on certain socio-cultural aspects. Finally, we encountered many patients who refused to participate in the study.

6. Conclusion

Abortion in our environment concerns young women at a precarious social and economic level. If the symptoms are the same regardless of the nature of the abortion, lethality would be the prerogative of induced abortions. The unwanted nature of the pregnancy is the main reason for abortion, which questions the problem of access to contraception. More than a socioeconomic problem, the societal and anthropological aspect related to abortions must be taken into account for the implementation of better strategies. The strategies already put in place by the Cameroonian government are gradually bearing fruit, but new approaches to family planning are necessary to reach the target and reduce maternal mortality and morbidity attributable to abortion.

Authors' Contribution

All authors have read and approved the final version of the manuscript. Ngo Dingom designed the study, collected the data and wrote the manuscript. Maffeu collected data, Essiben designed the study and wrote the final manuscript. Mol, Meukem, Ebong, Mpono, Boten, Batoum, Alima, Kamdem, Fouogue have read, translated and corrected the manuscript. Foumane directed the study, supervised the writing of the manuscript and validated the final version.

Conflicts of Interest

The authors declare no conflict of interest.

References

[1] Vinatier, D., Dufour, P. and Bérard, J. (2005) Avortements spontanés à répétition.

Journal de Gynécologie Obstétrique et Biologie de la Reproduction, **34**, 513.

[2] Organisation Mondiale de la Santé (2023) Mortalité Maternelle. https://www.who.int/fr/news-room/fact-sheets/detail/maternal-mortality

[3] Say, L., Chou, D., Gemmill, A., Tunçalp, Ö., Moller, A., Daniels, J., *et al*. (2014) Global Causes of Maternal Death: A WHO Systematic Analysis. *The Lancet Global Health*, **2**, e323-e333. https://doi.org/10.1016/s2214-109x(14)70227-x

[4] Atuhaire, S. (2019) Abortion among Adolescents in Africa: A Review of Practices, Consequences, and Control Strategies. *The International Journal of Health Planning and Management*, **34**, e1378-e1386. https://doi.org/10.1002/hpm.2842

[5] Sedgh, G., Bearak, J., Singh, S., Bankole, A., Popinchalk, A., Ganatra, B., *et al*. (2016) Abortion Incidence between 1990 and 2014: Global, Regional, and Subregional Levels and Trends. *The Lancet*, **388**, 258-267. https://doi.org/10.1016/s0140-6736(16)30380-4

[6] Guillaume, A. (2005) L'avortement provoqué en Afrique: Un problème mal connu, lourd de conséquences. https://www.documentation.ird.fr/hor/fdi:010036540

[7] Tiako, D.V., Nana, P.N., Fouelifack, F.Y. and Fouedjio, J.H. (2017) Contribution des avortements et des grossesses extra-utérines dans la mortalité maternelle dans trois hôpitaux universitaires de Yaoundé. *Pan African Medical Journal*, **27**, Article No. 248. https://doi.org/10.11604/pamj.2017.27.248.12942

[8] Foumane, P., Dohbit, J.S., Ngo Um Meka, E., Nkada, M.N., Ze Minkande, J. and Mboudou, E.T. (2015) Étiologies de la Mortalité Maternelle à l'Hôpital Gynéco-Obstétrique et Pédiatrique de Yaoundé: Une Série de 58 Décès. *Health Sciences and Disease*, **16**, 1-5.

[9] Ajavon, D.R.D., Ketevi, A., Tougma, A., Douaguibe, B., Logbo-Akey, K.E., Bassowa, A., *et al*. (2018) Prise en charge des avortements incomplets du premier trimestre au Centre Hospitalier Regional de Kara. *Journal de la Recherche Scientifique de l'Université de Lomé*, **20**, 233-240.

[10] World Bank Open Data. https://data.worldbank.org

[11] Barjot, P., Graesslin, O., Cohen, D., Vaillant, P., Clerson, P. and Hoffet, M. (2006) Grossesses survenant sous contraception orale: Les leçons de l'étude GRECO. *Gynécologie Obstétrique & Fertilité*, **34**, 120-126. https://doi.org/10.1016/j.gyobfe.2004.12.004

[12] Boucoiran, I., Trastour, C., Faraj, L., Delotte, J. and Bongain, A. (2011) Grossesse sous Implanon®: Une «enquête» à propos de trois cas. *Gynécologie Obstétrique & Fertilité*, **39**, e52-e54. https://doi.org/10.1016/j.gyobfe.2010.08.025

[13] Tebeu, P.M., Obama, M.T., Nghonguia, M.F., Major, A.L., Kouam, L. and Doh, A.S. (2008) Primiparite Age: Du concept a la definition d'une methode de determination.

[14] Sebti, M., Courbage, Y., Festy, P. and Kursac-Souali, A. (2009) Maghreb, Maroc, Marrakech: Convergences démographiques, contrastes socio-économiques. *Population & Sociétés*, **459**, 1-4. https://doi.org/10.3917/popsoc.459.0001

[15] Fouedjio, J.H., Teufack, P., Fouelifack, Y.F., Ebong, C., Foumane, P. (2022) The Early Complications of Induced Abortion Compared to Those of Spontaneous Abortion in Yaoundé-Cameroon: A Cohort Study. *Ethiopian Journal of Reproductive Health*, **14**, 10. https://www.ejrh.org/index.php/ejrh/article/view/518

[16] Carrier, J. and Amiot, N. (2023) Les saignements du premier trimestre à l'urgence: Comment améliorer nos pratiques chez la femme enceinte? *Soins d'urgence*, **1**, 20-27. https://doi.org/10.7202/1101853ar

[17] Socpa, A. and de Koning, K. (2022) For the Society of Obstetricians and Gynaecologists

in Cameroon (SOGOC).

[18] Mwetaminwa, S.G. (2018) Prévalence, complications et issue des avortements clandestins dans la ville de Kisangani en République Démocratique du Congo. *International Journal of Innovation and Applied Studies*, **25**, 403-409.

[19] Coulibaly, M., Doukouré, D., Kouamé, J., Ayékoé, I.A., Mélèdje-Koumi, M., Malik, S., *et al*. (2020) Obstacles socioculturels liés à l'utilisation de la contraception moderne en Côte d'Ivoire. *Santé Publique*, **32**, 389-397. https://doi.org/10.3917/spub.204.0389

[20] Kubuya, K.G. (2023) La contraception post avortement médicalisé à Walikale. *Annales de l' Unigom*, **13**, 18.

[21] Thomé, C. (2022) Les «méthodes naturelles» de contraception. *Cahiers du Genre*, **72**, 143-174. https://doi.org/10.3917/cdge.072.0143