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Abortions N'Djamena Mother and Child University Hospital Center: Epidemiological, Clinical, and Therapeutic Aspects

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Abstract

Objective: To improve management of the abortion population. **Patients and Method:** This was a prospective cross-sectional study with a descriptive aim, conducted over a period of 8 months from April to December 2024. All spontaneous or induced abortions managed in NMCUH were included. The variables studied were epidemiological, clinical, paraclinical, and therapeutic. Data collection was carried out using a pre-established form containing the study variables. We conducted an exhaustive sampling of all women referred for abortion to the gynecological and obstetric emergency department of NMCUH during the study period who met the inclusion criteria. **Results:** During the study period, we collected 406 cases of abortion out of a total of 3837 patients admitted to the emergency department. Gynecological and obstetric cases in NMCUH gave a frequency of 10.58%. The age group of 21 to 26 years accounted for 34.2% (n = 139). The median age of the patients was 27 years, with extremes of 14 and 40 years. Single patients accounted for 59.1% (n = 240). Metrorrhagia accounted for 74.2% (n = 301). Malaria accounted for 73.6% (n = 299). Gestational age of 7 to 13 weeks of amenorrhea represented 68% (n = 276). Spontaneous abortion was reported in 78% of our patients. Manual intrauterine aspiration accounted for 59.9%. Anemia accounted for 25% (n = 101). **Conclusion:** Abortion is common in our setting with a significant prevalence. Spontaneous abortion was predominant, and the causes were mainly dominated by malaria. Management included manual vacuum aspiration, antibiotic therapy, and administration of uterotonics. Anemia was the main reported complication. Restrictions on abortion laws mean that many voluntary terminations of pregnancy are treated as spontaneous abortions; therefore, promoting comprehensive abortion care as well as safe abortion within the limits of the law in our setting is necessary.

Keywords

Abortion, Management, NMCUH, Chad

1. Introduction

According to the WHO, abortion is the spontaneous expulsion of an embryo or fetus before it is viable, that is, before 22 weeks of gestation [1]. Abortion is the termination of pregnancy with total or partial expulsion of the conceptus before 180 days of amenorrhea, which corresponds to 28 weeks, the point from which a live-born viable child is assumed to be able to develop and live to an advanced age [2]-[4]. When gestational age is unknown, abortion is defined as the expulsion of a conceptus weighing less than 500 grams. Induced abortion occurs as a result of any actions intended to terminate the pregnancy. The issue of legalizing its practice has been the subject of debate and controversy in many countries, including Chad, due to ethical, moral, and religious considerations centered on the notions of the fetus's right to life, the embryo, and the human person [5]. The frequency of abortions is poorly known; on average, 8% of pregnancies end in a miscarriage. When taking into account very early terminations (shortly after fertilization), this frequency would be much higher. It is stated that one in four women experiences a miscarriage when pregnant [6]. Globally, the annual abortion rate has remained essentially unchanged between 1990-1994 and 2015-2019, estimated at 39 - 40 per 1000 women aged 15 to 49 years [1]. The total number of abortions worldwide, whether safe or not, has been estimated three times by the WHO in collaboration with the Guttmacher Institute: in 1995, 2003, and 2008. Between 1995 and 2008, the overall abortion rate declined, from 35 abortions per year per 1000 women of reproductive age (between 15 and 44 years old) to 28 per 1000 [7]. In the Americas, the number of risky abortions is estimated at 6.5 million.

In Europe, it represents 4.3 million.

In Africa, approximately 8.2 million unsafe abortions are performed each year, equivalent to 30 unsafe abortions per 1000 women of reproductive age [1]. According to estimates, 51,500 abortions were performed in Senegal in 2012. The abortion rate is estimated at 17 per 1000 women aged 15 to 44 [5]. In Chad, abortion is only permitted in cases of:

Risk to the mother's health;

A malformed and non-viable fetus;

Rape or incest.

The abortion rate in Chad was 39% over the period from 2015 to 2019 [6] [7]. Care has evolved significantly from curettage under general anesthesia to MVA (Manual Vacuum Aspiration).

However, MVA is not entirely without risk. Indeed, the occurrence of endometritis, uterine adhesions (synechiae), or uterine perforation is, nevertheless, rare.

Objective: improve management of the abortion.

2. Patients and Method

This was a prospective cross-sectional study with a descriptive study, conducted over a period of 8 months from April to December 2024. All spontaneous or induced abortions managed in NMCUH were included. The variables studied were epidemiological, clinical, paraclinical, and therapeutic. Data collection was carried out using a pre-established form containing the study variables. We conducted an exhaustive sampling of all women referred for abortion to the gynecological and obstetric emergency department of NMCUH during the study period who met the inclusion criteria (spontaneous or induced abortions, diagnosed in NMCUH or in another health structure were included). Data analysis was performed using SPSS software v.21. Research authorization was granted, and informed consent was obtained from the patients.

3. Results

3.1. Frequency

During the study period, we collected 406 cases of abortion out of a total of 3837 patients admitted to the emergency department of Gynecological and Obstetric cases in NMCUH, giving a frequency of 10.58%.

3.2. Age

Table 1. Distribution of patients by age.

Age (year)	n	%
14 - 20	128	31.5
21 - 26	**139**	**34.2**
27 - 35	115	28.3
≥35	24	6
Total	**406**	**100**

The age group of 21 to 26 years accounted for 34.2% (n = 139). The median age of the patients was 27 years, with extremes of 14 and 40 years (Table 1).

3.3. Marital Status

Table 2. Distribution of patients according to marital status.

Marital status	n	%
Married	107	26.4
Single	**240**	**59.1**
Divorced	55	13.5
widow	4	1.0
Total	**406**	**100**

Single patients accounted for 59.1% (Table 2).

Education level. Uneducated patients accounted for 30% (n = 122).

3.4. Clinical Data

Reason for consultation.

Table 3. Distribution of patients according to the reason for consultation.

Consultation reason	n	%
Metrorrhagia	**301**	**74.2**
Pelvic pain	83	20.4
leucorrhea	18	4.4
other	4	1.0
Total	**406**	**100**

Metrorrhagia accounted for 74.2% (Table 3).

3.5. Etiologies

Table 4. Distribution according to etiologies.

Etiology	n	%
Malaria	**299**	**73.6**
Genital infection	80	19.7
Iatrogènic	27	6.7
Total	**406**	**100**

Malaria accounted for 73.6% (The rapid test was used for the diagnosis) (Table 4).

3.6. Gestational Age

Table 5. Distribution according to gestational age.

Gestational age (week)	n	%
≥6	50	12.3
7 - 13	**276**	**68**
14 - 20	80	19.7
Total	**406**	**100**

Gestational age of 7 to 13 weeks of amenorrhea represented 68% (n = 276) (Table 5).

3.7. Type of Abortion

Spontaneous abortion was reported in 78% of our patients (n = 317).

3.8. Evacuation Method

Table 6. Distribution according to the method of uterine evacuation.

Evacuation mode	n	%
AMIU	**243**	**59.9**
Misoprostol	73	18
Misoprostol + **ocytocin**	81	19.9
Misoprostol + mifepristone	9	2.2
Total	**406**	**100**

Manual intrauterine aspiration accounted for 59.9% (n = 243) (Table 6).

3.9. Complications

Table 7. Distribution of patients according to complications.

Complications	**n**	**%**
Anemia	101	25
Sepsis	5	1.2
hysterectomy	3	0.7
death	3	0.7

Anemia accounted for 25% (n = 101). Maternal death were sepsis that required intensive cares; unfortunately, patients died (Table 7).

4. Discussion

During the study period, we collected 406 cases of abortion out of a total of 3837 patients admitted to the gynecology and obstetrics emergency department (10.58%). This frequency is higher than that reported by Sedgh *et al.*, who reported 6.1% [5]. This difference could be explained by the delay in prenatal consultation. The most represented age group was 21 to 26 years old, with 34.2%. The median age of the patients was 27 years, with extremes ranging from 14 to 40 years. This rate is higher than that reported by Prata N. [8] in 2010, who reported an average age of 25 years. This age group is the most sexually active. Regarding marital status, 59.1% of the patients were single. This result is higher than that of Cefoerp [9] in 2001 in Senegal, which found 35.5%.

This result could be explained by the fact that abortions outside healthcare facilities are often the domain of young single women, on the one hand, and, on the other hand, they are much more likely to have unwanted pregnancies. Regarding the uneducated, they were the majority with a rate of 30%. This rate is lower than that reported by Mamoudou L. [10] in 2024 in Mali, which reported a rate of 47.3%. This result may be justified by the low level of education, which could be the cause of the high frequency of abortions due to ignorance or lack of adherence

to health advice, particularly regular prenatal check-ups. Clinical aspects: Regarding the causes, malaria was the most frequently found cause, accounting for 73.6%. The role of this parasitic infection in the occurrence of spontaneous abortions is all the more significant as our study was conducted in a malaria-endemic country.

During the study, pregnancy interruptions were observed much more frequently between the 7th and 13th weeks of amenorrhea, representing 46.1% of the patients.

Regarding the type of abortion, the study showed that spontaneous abortions were predominant, accounting for 78% of cases. This finding confirmed the literature data showing a high rate of spontaneous abortion [11] [12].

Therapeutic and prognostic aspects AMIU was the most commonly used method, with a percentage of 59.9%. This method allows for quick management and also helps prevent complications.

Most patients did not have complications, representing 72.4%. However, anemia was found in 25%. The rate of complications in the form of anemia is higher than that reported by Mamoudou L. [10], who noted a rate of 19.1%. This could be related to metrorrhagia and delays in seeking consultation.

5. Conclusions

Abortion is common in our setting, with a significant prevalence. Patients are young, single, with a low level of education, primigravida, and have not attended prenatal consultations. The main symptom was metrorrhagia. Spontaneous abortion was predominant, and the causes were mainly dominated by malaria. Most cases involved incomplete abortion. Management included manual vacuum aspiration, antibiotic therapy, and administration of uterotonics. Anemia was the main reported complication, and we recorded 3 cases of death.

Restrictions on abortion laws mean that many voluntary terminations of pregnancy are treated as spontaneous abortions; therefore, promoting comprehensive abortion care as well as safe abortion within the limits of the law in our setting is necessary.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] World Health Organization (WHO) (2004) Medical Abortion. Technical and Strategic Guidelines for Health Systems. 146 p.

[2] Guillaume, A. and Khlat, M. (2004) Frequency and Conditions of Abortion Use. Reproductive Health in the Time of AIDS in Africa, CEPED Collection. 73 p.

[3] Bankole, A., Remez, L., Owolabi, O., Philbin, J. and Williams, P. (2020) From Unsafe to Safe Abortion in Sub-Saharan Africa: Slow but Steady Progress. https://doi.org/10.1363/2020.32446

[4] Rossier, C. (2014) L'avortement non sécurisé reste fréquent dans le monde, mais il est moins souvent fatal. *Population & Sociétés*, **513**, 1-4. https://doi.org/10.3917/popsoc.513.0001

[5] Sedgh, G., Sylla, A.H., Philbin, J., Keogh, S. and Ndiaye, S. (2015) Estimates of the Incidence of Induced Abortion and Consequences of Unsafe Abortion in Senegal. *International Perspectives on Sexual and Reproductive Health*, **41**, 11-19. https://doi.org/10.1363/4101115

[6] Ministry of Public Health (2017) Law No. 2017-01 on the Promotion of Harm to the Person or the Status of the Child in Chad.

[7] Safe2choose (2015) Abortion in Chad. https://safe2choose.org/fr/abortion-information/countries/chad

[8] Prata, N., Bell, S., Holston, M., Gerdts, C. and Melkamu, Y. (2011) Factors Associated with the Choice of Post-Abortion Contraception in Addis Ababa, Ethiopia. *African Journal of Reproductive Health*, **15**, 51-57.

[9] Ceforep (2001) Study Report on Referral and Some Aspects of Abortion Services in the Regional Hospitals of Kaolack, Diourbel, and in the Health Center of Sokone in Senegal. 7-20.

[10] Mamoudou, L.G. (2024) Spontaneous Abortions: Diagnostic, Epidemiological, Prognostic, and Therapeutic Aspects at Sominé Dolo Hospital in Mopti in 2022. University of Science, Technology and Technology of Bamako.

[11] Kwete Kwete, S. (2024) Assessment of Adolescent Girls' Knowledge of Complications from Induced Abortions: Study Conducted in the Aketi Health Area in the Kinshasa Health Zone. *Health Sciences Review*, **3**, 60-66.

[12] Naman, K. (2010) Management of Spontaneous Abortions at the Reference Health Center of Commune V in the Bamako District Concerning 156 Cases. University of Bamako.