



## Prevalence, Complications and Outcome of Clandestine Abortion in Rural Eastern Area of Democratic Republic of the Congo (D.R.C)

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### Authors' contributions

This work was carried out in collaboration between all authors. Authors MKM, and MKI designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors TKK and JKK managed the analyses of the study and the literature searches. All authors read and approved the final manuscript.

### Article Information

DOI: 10.9734/ACRI/2018/41321

#### Editor(s):

(1) Amal Hegazi Ahmed Elrefaei, Division of Radioisotope Production, Hot Lab. and Waste Management Center, Atomic Energy Authority, Egypt.

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Complete Peer review History: <http://www.sciencedomain.org/review-history/24579>

Original Research Article

Received 24<sup>th</sup> February 2018  
Accepted 6<sup>th</sup> May 2018  
Published 11<sup>th</sup> May 2018

### ABSTRACT

**Background:** The number of pregnancies per year in the world is about 210 million, of which 182 million are in developing countries. The abortion reflects the significance of unplanned pregnancies and unsafe abortion is one of the biggest contributors to global maternal mortality. The objective of this study was to investigate the prevalence, complications and outcome of clandestine abortions in Referral Health Center of Eringeti, in the Oicha health area in the DRC.

**Methods:** This was a prospective cross-sectional study, which took place from 1st November 2016 to 30th November 2017 on 52 patients received in the department of gynaecology and obstetrics of

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the Eringeti Referral Health Center in DRC following the complications related to abortion.

**Results:** The prevalence of the clandestine abortion was from 45.61% in the Eringeti Referral Health Center. The abortive had largely set the age below 20 years, no level of study; they were farmers and bachelors. Among 86.5% of them were nulliparous and first pregnancies and pregnancy had largely left the age less than 12 weeks. The abortions were carried out at the homes of the patients in 96.2% of cases and traditional decoctions and pharmaceutical products obtained outside of health facilities were more used. The genital bleeding, uterine perforation and endometritis were major complications listed and death was recorded related to the post septicemia endometritis not tidy at home.

**Conclusion:** The clandestine abortion is a major problem of public health in the Oïcha Health area in the North Kivu Province in DRC. The awareness on responsible sexuality and family planning would be important in the decrease of this practice regarded like illegal in our country.

*Keywords: Prevalence; outcome; complications; abortion; clandestine; Eringeti.*

## 1. INTRODUCTION

Abortion is an ancient method of fertility regulation that existed and was used long before the appearance of contraceptive methods [1]. It is practised in all countries, but unsafe abortions is to say made in insufficient hygiene and safety conditions, mainly occur in developing countries [2]. In these countries, accesses to abortion conditions are very limited and it is estimated that 99% of abortions are done illegally in Africa, 95% in Latin America and 37% in Asia. This illegality has the effects of illegal practices carried out in the inadequate sanitary environment and by insufficiently qualified or not, the consequences are a real public health problem [3].

The clandestine abortion remains a major public health problem in developing countries that prohibit this practice [4,5] and unsafe abortion is one of the biggest contributors to global maternal mortality [6].

In France, for example, despite strong contraception, an estimated 200,000 abortions occur each year [7].

During the period from 2010 to 2014, the number of induced abortions each year in Africa is estimated at 8.2 million, up from 4.6 million annual practised from 1990 to 1994, mainly due to the increased number of women of childbearing age [8].

According to the World Health Organization, outside of South Africa, Cape Verde and Tunisia whose laws allow abortion, more than 300,000 girls and women die in silence every year due to illegal abortions, particularly because of the very restrictive laws against abortion [9].

In a study conducted by the Gabonese Ministry of Health in 2001 on maternal and child health, one-quarter of maternal deaths (28.8%) recorded in this period was due to clandestine abortions including a teen [10].

A study in Côte d'Ivoire on the role of abortion in the fertility transition in Abidjan showed that contraception and abortion have a substantially equal weight in the reduction of fertility in the city Abidjan [7].

Clandestine or "criminal" Abortion has become a phenomenon of Congolese and society should not close our eyes about the answer to this, according to human rights activists. In Kinshasa, the capital of the Democratic Republic of the Congo, in Bukavu, the capital of South Kivu province in the East, and to Kikwit, the main town of Bandundu, in the southwest countries, the figures are worrying. For the month of March 2009, "more than 20 cases of illegal abortions followed dropout fetuses or babies in sewers and streets of Kinshasa" were reported, broadcast on national television and relayed by several private channels the country [11].

Abortion causes a significant portion of these maternal deaths and that weight is underestimated because this act is illegal, and some deaths may be classified under other headings: infections, bleeding etc. In the absence of recent statistics in Oïcha health area in the Democratic Republic of the Congo, we asked about the question of what the status of places of this problem is and what the serious consequence of the latter in is in general and in particular Eringeti Reference Health Center in our country.

The objective of this study was to investigate the prevalence, complications and outcome of clandestine abortions at Eringeti Reference Health Center in Oicha health area in the Democratic Republic of the Congo.

## 2. METHODOLOGY

Our study was conducted in Obstetrics and Gynecology department of the Reference Health Center of Eringeti in North Kivu Province, in the Democratic Republic of the Congo. The Eringeti Reference Health Center is located in the village of Eringeti in North-Eastern of Democratic Republic of the Congo, in the North Kivu province, Beni territory, 60 km North-East of the town of Beni, in the Oicha Health Area, on the border with the Ituri Province.

This study involved 52 patients came to consult for complications related to abortion and who were followed at Eringeti Reference Health Center. The sample was comprehensive.

This was a prospective study ran from November 2016 to November 2017. Included in our study, all the women or girls who looked at Eringeti Reference Health Center during our study period, for complications related to abortion. The abortion diagnosis was made from the interrogation and the classification criteria established by World Health Organization (W.H.O) abortions. After establishing the diagnosis, a survey questionnaire was submitted after their consent. For those who were unconscious, the questionnaire was proposed to them the next day after completion of first management. The questionnaire was anonymous.

The information for each patient was collected on individual survey cards previously prepared with the following elements (patient age, gestational age, educational level, marital status, occupation, gravidity, parity, instead of abortion, an abortive product used). The evidence about the complications after abortion was found on hospital sheets. Data entry and analysis was performed using the EPI INFO software version 3.5.4 of July 30, 2012. The standards of ethics were respected in carrying out this work. Informed consent of patients was obtained as part of their inclusion in the study. Confidentiality was guaranteed for everyone because a code was given to them instead of the name. Those

unable to give their point of view, a relative or parent had to consent.

## 3. RESULTS

### 3.1 Prevalence of Clandestine Abortions in the Obstetrics and Gynecology Department

During our study period, 114 patients consulted for abortion in Gynecology and Obstetrics of Eringeti Reference Health Center among which 52 had voluntarily terminated their pregnancies, the prevalence of clandestine abortion was 45.61%.

### 3.2 Sociological Characteristics of Patients

The following table repartee patients according to their socio-demographic characteristics.

### 3.3 Special Features of the Abortion

The Table 2 divides the patients according to their particularities abortions.

### 3.4 Complications and Outcome of Abortion

The Table 3 retorted patients based on outcome and complications of abortion.

## 4. DISCUSSION

The prevalence of clandestine abortions is 45.61% in Eringeti Reference Health Center during our study period. This finding is made by several African studies found rates ranging from 36% to 69% [12,13]. Joseph Béné Bi Vroh and his collaborators in Ivory Coast found a prevalence of 42.5% in a study carried out in Ivory Coast on the epidemiology of induced abortions across the country in 2012 [14].

In this research, the majority of patients had a lower age at 20 years in 75% of cases. The average age of patients was  $18 \pm 92$  years with extremes 14 and 41 years. More generally, concerning clandestine abortions, the tranche from 19 to 25 years is the age group raised by African studies [12,15,16]. Abortion affects all age groups and especially the most sexually active women. This observation was made by BARRÈRE [17].

**Table 1. Distribution of patients according to their socio-demographic characteristics**

<b>Socio-demographic characteristics of the patients</b>	<b>Number</b>	<b>Percentage</b>
<b>Age range (in years)</b>		
Less than 20	39	75
21- 30	11	21.2
31-40	1	1.9
Over 40	1	1.9
<b>Marital status</b>		
Bachelors	43	82.7
Married	9	17.3
<b>Study level</b>		
No study level	40	76.9
Primary	9	17.3
Secondary	3	5.8
University	0	0
<b>Profession</b>		
Farmers	39	75
Trader	13	25
<b>Gravidity</b>		
Gravida	45	86.5
Multigravida	5	9.6
Hight multigravidae	2	3.9
<b>Parity</b>		
Nulliparous	45	86.5
Primiparae	4	7.7
Multiparous	3	5.8
High parity	1	1.9
<b>Total</b>	<b>52</b>	<b>100</b>

**Table 2. Special features of the abortion**

<b>Special features of the abortion</b>	<b>Number</b>	<b>Percentage</b>
<b>Age of pregnancy</b>		
0-12 weeks	49	94.2
13-28 weeks	3	5.8
<b>Shooting abortion</b>		
The patient's home	50	96.2
Dispensary instead	2	3.8
<b>Quality of abortionist</b>		
Auto abortion	40	77
Paramedical personal	12	23
<b>Abortive product</b>		
Traditional decoctions	14	26.9
Ecorse trees	3	5.8
<b>Pharmaceutical products outside the reference health center</b>		
* Misoprostol	7	13.5
*Potassium permanganate	4	7.7
*Others	2	3.8
Illegal curettage	2	3.8
Curettage with a curette at the Reference Health Center	13	25
Oxytocin injection at the Reference Health Center	7	13.5
<b>Total</b>	<b>52</b>	<b>100</b>

**Table 3. Complications and outcome of abortion**

<b>Complications and outcome of abortion</b>	<b>Number</b>	<b>Percentage</b>
<b>Complications</b>		
Hemorrhage	28	53.8
Endometritis	11	21.2
Traumatic (uterine perforation)	13	25
<b>Outcome of abortion</b>		
Healing	51	98.1
Death	1	1.9
<b>Total</b>	<b>52</b>	<b>100</b>

S. Mayi-Tsonga and his collaborators found in their study in Gabon on the prevalence of clandestine abortions in Libreville Hospital Center patients the average age of  $22.4 \pm 5.3$  years, with extremes of 14 and 39 years [18].

In Africa, the conditions of entry in sexuality for men and women are changing. These changes contribute to men and women to a lengthening of the period of sexual activity before marriage with consequences exposure increasingly marked risk of unplanned pregnancies. Wedlock pregnancies are sometimes poorly accepted by the family and society and access to contraception is still difficult for women especially young people [19].

In our area, pregnancy before marriage is considered a serious offence and a disgrace to the family and the community. This explains, in our study, the highest prevalence of clandestine abortions in the lower age group to 20 years. The latter abounds teenage, unmarried daughters and no level of study.

It is clear from this work that the majority of patients was a bachelor, without any level of education and farmer respectively 82.7%, 76.9% and 75% of cases. Joseph Béné Vroh Bi and his collaborators in the Ivory Coast found that the majority of women practising illegal abortion was unschooled in 36.8% of cases and 58.9% of them were bachelors [14].

Several studies conducted in hospitals in developing countries, women victims of clandestine abortion complications prove that this is the most frequently young women with little education, from social disadvantage. This differentiation reveals the conditions under which these abortions are: methods used, people involved and instead of abortion and abortions final cost and security [20].

Moreover, other studies have shown that the likelihood of having an abortion depends on the

education of women. Indeed, more than this level, the higher the probability that it aborts increases. This fact was noticed in Togo [21] and in Ivory Coast, where 48.1% of women with secondary or older reported having aborted at least once [22].

The attitude of parents is often the direct or indirect cause of abortion. Indeed, many parents threatened their pregnant girls, asking them to abort for fear of being evicted from the family home or interrupt their studies [23]. This fear of the reaction of parents who consider pregnancy outside marriage as a disgrace to the family, is found more among the causes of the voluntary interruption of pregnancy among young girls has been proven in a study by William [24].

From this work, 86.5% of patients were primigravida and nulliparous. This is explained by the fact that the pregnancy was unwanted. Apart from the denial of pregnancy, a large set, these were bachelors, totally dependent on their families.

In Gabon, S. Mayi-Tsonga and his collaborators found in their study that repeated pregnancies would be an exposure factor to unsafe abortion. This would reflect the extent of the problem of unwanted pregnancies in their country. The women use abortion as a means of spacing pregnancies failing to use a modern contraceptive method [18].

Regarding the specifics of abortion, complications and outcome, it is clear from this work that 94.2% of pregnancies were an age less than 12 weeks. This is explained by the fact that it is easy for a young girl in sexual activity and having regular menstruation to know that she is pregnant. They prefer to interrupt the pregnancy quietly even before other clinical signs other than amenorrhea. All this in order to avoid being pregnant known by family and the community. 96.2% of abortions were done at home by patients and made them even in 77% of cases.

They used traditional decoctions, pharmaceuticals procured outside health facilities including misoprostol, potassium permanganate and other ignored. 3 of them have used tree bark to remove the products of conception. Other products (Misoprostol, oxytocin, ...) and technique (curettage with a curette) used to reference health center were made only in order to reduce the consequences of the various complications finally up the general condition of patients and this favouring the expulsion of the remaining product design. However, as complications, we counted bleeding in 53.8% of cases, uterine perforation in 25% of cases and endometritis in 21.2% of cases. Of 52 patients, one had died as a result of sepsis occurred after an untreated home endometritis.

S. Mayi-Tsonga and his collaborators found in their study conducted in Gabon that the major complication was bleeding uterine retention of ovular debris [18].

The consequences of abortion are poorly measured at several levels. They are women who practice such abortions when with unreliable methods and with the help of unskilled, have not always aware of the seriousness of the risks they are exposed [25]. These consequences and severity are closely related to the conditions under which abortions are performed, these methods differ in their safety and cost: as those made with inexpensive methods are generally most at risk [26].

## 5. CONCLUSION

Clandestine abortion is a major public health problem in the Oïcha health zone in general and the Health Center of Reference Erineti in particular. One death was listed during our study period.

The awareness on the danger facing the voluntary interruption of pregnancy and its unpleasant consequences up to the loss of life, hysterectomy and secondary infertility is the only way that could contribute to the decline of this practice even considered as illegal in our country. On this, the practice of responsible sexuality and lessons on the family schedule would need to get there.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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The peer review history for this paper can be accessed here:  
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