**Illegal Abortions and their Consequences in the Health Referral Center of the First Commune of Bamako (Mali)**

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**Abstract:** We performed a prospective cross sectional study in the Health Referral Center of the first Commune of Bamako (Mali). The aim was to study the legal issues of illegal abortions. We included 73 patients from 12-60 years old. The age group 12-19 years accounted for 57.5% (n=42). The Students were prevalent, 49.3%. The more frequent abortionists were nurses, 56.2% (n=41). Uterine probing was the most frequent method of abortion, 41.1% (n=30). The most common complication was hemorrhage (68.5%) and was the chief complaint.

**Keywords:** Abortion, Illegal, Consequences

INTRODUCTION

Abortion is the termination of pregnancy before the fetus is viable, otherwise is capable of conducting an extra uterine independent life [1, 2]. According to the circumstances there are two major types of abortions: spontaneous abortion which occurs without the action of third party, and induced abortion which is a voluntary termination of pregnancy with or without medical assistance [3].

From the legal point of view, we have the induced illegal abortions, which consist in the use of means or of substances to trigger the premature expulsion of the fetus, regardless of the age of pregnancy for any reason other than the protection of the life of the mother [4] and the therapeutic abortions when there is a fetal malformation recognized or suspected or if the evolution of the pregnancy would create a major risk to the health or life of the mother [1].

Whatever the type, abortion remains a major public health problem in the world. Indeed, in the world, in 2003, the abortion annual rate was estimated at 29 per 1,000 women aged 15 to 44 years although the rate is variable from one continent to another.

In Europe, we have both the lowest rate, (an average of 12 for 1000 in Western Europe) and the highest rate (44 for 1000 in Eastern Europe); it is more often legal abortions; in Latin America, the rate of abortion is 31/1000 women and 29/1000 women in Africa, where it is commonly illegal, since with few exceptions, these countries have a very restrictive legislation; In Asia, where the legislation varies greatly from one country to another, the average rate is 29/1000, approximately a third of the abortions are illegal [5].

In Africa, most countries prohibit the practice of abortion; others permit it when the life of the mother is threatened; however the diagnosis must be confirmed by more than one doctor. Apart from these cases, abortion is punishable by imprisonment in some countries (Kenya, Nigeria, Senegal, and Uganda) [6].

In Mali, the criminal code, in its article 211 prohibits any abortion for any reason other than the protection of the life of the woman. Under the terms of articles 212 and 213 of this code, the author of abortion may face a penalty of imprisonment from 6 months to 20 years [4].

The main objective of this study was to explore the forensic context in which illegal abortions are performed.

MATERIAL AND METHODS
It is a prospective cross-sectional study from July 1st 2010 to January 31st, 2012 in the obstetrical ward of the Health referral Center of the 1st Commune of Bamako. Were included, all the women admitted for non-therapeutic abortion.

The sampling method was a simple random sampling. The size of the sample was obtained by the following formula $N = P \times Q \times (\epsilon/\alpha)^2$. $P$: the prevalence of induced abortions, here estimated at 5.04% in a previous study [2]. $P = 5.04\%$ and $Q = 1 - P$, therefore $Q = 1 - 0.0504 = 0.9496$, taking as error $\alpha = 5\%$ therefore $\alpha = 1.96$ and taking a precision $\epsilon = 5\%$, $N = 0.0504 \times 0.9496 \times (1.96 / 0.05)^2 = \approx 73$ patients.

The data were collected from an individual sheet of data after informed consent. The data were analyzed with the software SPSS 18.

RESULTS
- Of a total of 879 women admitted for abortion, 73 were illegal with a frequency of 12.04%.
- The age group of 12-19 years was the most involved, 57.5% (n=42 cases).
- Students were prevalent with 49.3% (Fig. 1).
- The unmarried women were much more represented, 61.6% (n=45).
- The abortion was performed most often at the home of the practitioner, 46.6% (n=34).
- The initiator of the abortion was the patient 63% (n=46).
- The practitioners the most involved were nurses, 56.2% (n=41); (Fig. 2).
- Uterine probing was the most frequent method of abortion, 30 cases (41.1%).
- The reasons of abortion were among others, the shame of being pregnant, 28.8% (n=21) Bleeding were the most frequent complications with 68.5% (Table 1).
- The temporary work inability ranged from 1 to 5 days, 42.4% (Table 2).
- The quantum doloris or suffering endured was average (4/7) in 35.6% (n=26).
- 40 (54.8%) women regretted after the induced abortion.
- 30.1% of the women agreed for the decriminalization of abortion in Mali.
Table 1: Distribution of patients according to the complications

<table>
<thead>
<tr>
<th>Complications</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemorrhage</td>
<td>50</td>
<td>68.5</td>
</tr>
<tr>
<td>Infection</td>
<td>20</td>
<td>27.4</td>
</tr>
<tr>
<td>Drug poisoning</td>
<td>3</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Fig. 3: Distribution of patients according to the quantum doloris

Table 2: Distribution of patients according to the total work inability

<table>
<thead>
<tr>
<th>Total work inability (days)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>31</td>
<td>42.4</td>
</tr>
<tr>
<td>6-10</td>
<td>24</td>
<td>32.9</td>
</tr>
<tr>
<td>11-15</td>
<td>7</td>
<td>9.6</td>
</tr>
<tr>
<td>16-20</td>
<td>5</td>
<td>6.8</td>
</tr>
<tr>
<td>21-25</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>26-30</td>
<td>4</td>
<td>5.4</td>
</tr>
<tr>
<td>31-45</td>
<td>3</td>
<td>4.1</td>
</tr>
</tbody>
</table>

DISCUSSION

Out of 879 women admitted for abortion, 73 were illegal with a frequency of 12.04 %.

Our results are comparable to those found by Traore in Mali [7], in 2003: 11.55%.


This rate of 12.04 per cent of illegal abortion is even underestimated, since only the complicated cases of abortions are admitted for medical care.

The majority of our patients were teenagers with an age between 12-19 years (57.5 %). This frequency is higher than those of Nayama et al. [12] in 2000 in Niamey who found that 25.16% of their patients were less than 20 years.

Other authors reported lower rates: Alihonou [13] in Cotonou, Hyjazi [14] in Guinea found respectively 44.8 % and 30% of abortion in teenagers.

In the Republic of South Africa, Larsen [15] found that the age group most involved in abortion was 26 -30 years. The frequency of abortion can be due to the lack of information about sexuality and contraception. A survey carried out in Bamako by Samake proved that 74.7% of girls had their first sexual intercourse between 10 to 18 years [9].


In our study 21.9 % of the patients had a primary level, 26.0% had a secondary level, 9.6 % a higher level while 38.4 % were illiterates.

In Mali, Konate [11] found 75.41% of patients with a low educational level among them, 49% had primary level. This trend is also observed by Traore [7] who reported 27.6 % of women with primary level and 4.8% with higher level.

Other authors in the sub-region confirmed the same trend as Gandzien [16] in Brazzaville who found 77.8 % of patients with secondary education, Gondo [17] in Abidjan found primary level in 28 %, secondary level in 36 %, higher level in 2%; 34% of patients were illiterates. The relatively high frequency of abortions...
among the illiterate can be explained by their ignorance of means of contraception.

Many studies demonstrated that single people are the most exposed to abortion [7, 9, 11] as in our study (61.6 %).

Unlike in the Arab countries, according to Aldbeeb [18], where induced abortion is especially the fact of married women, in our study only 21.8 per cent of women were married. In our country, sexual immorality is regarded as an abomination among married women. Also after the marriage, the needs of women are usually catered for by husbands in contrast to the single women who must fight for their survival.

46.6% of illegal abortions were performed at the home of the practitioner; it is corroborated by Akpovi [19] in Cotonou who found that 86.44% of induced abortions were performed at the home of the practitioner.

These results are contrary to those of Tall [2] who found that the hospital was the place the more frequent: 21.7 % followed by the home of the practitioner, 16.1 %. The fear of being discovered, push the abortionists to practice in their homes.

The authors of abortion vary in our study; 56.2% were nurses, 20.5% were midwives, 5.5% were doctors, and 11.0% were the patients themselves (auto-abortion). Gandzien [16] in Brazzaville found that the patients themselves were responsible for induced abortion in 55.56 %, followed by the nurses, 28.57 %.

Many authors highlighted the high rates of abortions performed by the paramedics as Akpovi [19] who found 38.98% of abortions performed by nurses, Tall [2] in 2005 found 30.6 % of abortion performed by nurses and 17.2% by midwives; Traore [7] found 60 6% of abortion performed by paramedical staff.

The main reasons for the practice of abortions were shame of being pregnant, 28.8 %, and the family pressure (19.2 %).

Gandzien [16] in Brazzaville found as reasons the refusal of the partner to accept the pregnancy (25.4 %) followed by the unwanted pregnancy by the women (20.63 %).

Sepou [10] in 1997 in the Central African Republic found that the reasons given for the practice of illegal abortion were mostly economic (61.5 %).

The uterine probe was the most used method, 41.1%, followed by the use of pharmacological methods (34.2 %) and the curettage (13.7 %).

Sutter in France [20] found 59% of abortion performed through uterine probe.

Bleeding was the most frequent complication in 68.5 %, followed by infections, 27.4% and drug poisoning, 4.1 %.

The duration of the temporary work inability ranged from one to five days in 42.4%, six to ten days in 32.9% and eleven to fifteen days in 9.6 %.

About the quantum doloris or suffering endured, 35.6 % of the patients were quoted 4/7 =medium, 21.9% quoted 5/7 =important enough, 20.5% quoted 3/7 =moderate, 16.4% quoted 6/7 =important; and 5.5% quoted 2/7 = Light.

Our results corroborate those of Akpovi [19] in Cotonou who found that more than 3/4 of the patient’s qualified abortion as painful and more than 1/3 qualified it as traumatic.

Despite these sufferings endured by women, 33 women (45.2%) were happy with abortion while 40 women (54.8%) expressed regret after abortion.

More than half of our patients disagreed with the decriminalization of abortion in Mali, 69.9 % (n=69.9 %) whereas 22 women (30.1 %) agreed with the decriminalization of abortion.

CONCLUSION
Illegal abortion is an important public health problem in countries such as Mali where the relevant legislation is restrictive. It is a real social phenomenon involving accomplices like relatives or health professionals. Illegal practice in Mali, generally performed by paramedical personnel, abortion induces very often dramatic complications among women. The awareness of women and the enforcement of law could significantly reduce the frequency of illegal abortions.

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