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Epidemiological Clinical Aspects and Medical Management of Sexual Assault in the Region of Ségou in Mali

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Abstract

Introduction: Sexual assault is an act of a sexual nature perpetrated on another person without their consent. **Goal:** To describe the epidemio-clinical aspects and the medical management of sexual assault in the Segou region. **Methodology:** This was a retro-prospective descriptive study from September 2010 to September 2018 on the alleged female victims of sexual assault registered in the Gynecology and Obstetrics departments of the hospital and the sanitary quarters of Ségou. **Results:** We recorded 107 cases of sexual assault out of 47,729 gynecological consultations, representing a hospital prevalence of 0.22%. The victims were between 10 and 15 years old in 48.59% of the cases. Students were the most represented with 53.27% (57/107) of cases. Genito-genital contact was recorded in 90.65% (97/107) of cases. Vulvo-perineal lesions were present in 44.86% (48/107) of survivors. Hymenial deflowering was the most frequent traumatic genital lesion accounting for 43.70% (21/48) of old cases and 27.00% (13/48) of recent cases. Sexual assault was committed by a single individual in 60.75% (65/107) of cases and by a friend of the victim in 21.5% (23/107) of cases. The survivors had consulted within 24 hours of the sexual assault in 53.27% (57/107) of the cases, the treatment was medical in 68.22% (73/107) and medical-surgical in 4.7% (5/107), post-exposure prophylaxis to the Human Immunodeficiency Virus (HIV) was performed in only 26.16% (28/107) of survivors. **Conclusion:** Sexual assault remains a concern although its frequency is low. This scourge mainly affects children and adolescents, and the

lesions are mainly genitals.

Keywords

Aspects, Sexual Assaults, Epidemio-Clinics, Management, Segou

1. Introduction

Sexual abuse or sexual assault constitutes an entity of violence against women in the same way as physical violence, female genital mutilation and forced marriages. According to international law, it is any sexual offense committed with violence, coercion, threat or surprise on the person of another. Sexual assault is currently a major public health problem affecting millions of people each year around the world [1]. Violence against women/girls is a daily phenomenon that has existed since ancient times and is unfortunately still observed today in our society. It creates and maintains the enslavement and subordination of women/girls, wrongly delivered as inferior beings to men/boys.

Mali is a country where it is still very difficult to know the extent of sexual violence because of the security crisis it has been experiencing since 2012, but admitting to having been raped is still a source of shame [2] [3]. From January to April 2020, the Information Management System related to gender-based violence in Mali set up by the United Nations Population Fund Agency (UNFPA) recorded 1199 cases, including 359 sexual assaults. These data show an increase of 11% compared to those recorded in the same period of 2019. Thirty-six percent (36%) of these cases are sexual violence, 19% of physical assault, 16% of denial of resources, 21% of psychological violence, 8% of early marriages. Ninety-seven percent (97%) of these cases were reported by women, of which 48% were by girls under 18. In Mali, more than 35% of women and girls experienced sexual and/or intimate violence in their lifetime. Fifty percent (50%) of women were married while they were still children [4]. Our goal was to describe the epidemiological-clinical aspects and the management of female sexual assault in the Segou region.

2. Patients and Methods

This was a retro-prospective descriptive study from September 2010 to September 2018. Sampling was exhaustive including 107 files of alleged female victims of sexual assault recorded in the Gynecology and Obstetrics department of the hospital of Ségou and in the medical quarters of Ségou. The definition for considering cases of sexual assault was that of the Criminal Code of Mali: "Any act of sexual penetration, of whatever nature, committed on the person of another, by violence, constraint, threat or surprise is a rape."

The variables analyzed were quantitative and qualitative and concerned:

Socio-demographic characteristics: age, sex, profession, status. The circumstances of the aggression are the place of the aggression, the schedule, the number of ag-

gressors, and the link with the aggressor. The inciting factors are according to the interview of the detained aggressors.

Clinical data are type of sexual act undergone, time to consultation after the assault, type of objective genital lesion, topography of genital lesions. Paraclinical data and treatments received after the assault: HIV test, pregnancy test, administration of ARVs, emergency contraception, type of emergency contraception used, administration of antibiotics, and the repair. An appointment was fixed one month later for the verification of the HIV serology and the pregnancy test in the patients, then another appointment at three months for the verification of the HIV serology. The HIV tests used rapid diagnostic tests, of the determine type. Urinary tests for the detection of chorionic gonadotrophic hormone were used for the diagnosis of pregnancy.

After obtaining the administrative agreement as well as the approval of the ethics committee, we proceeded to collect the data using a technical sheet designed for this purpose. The data collected was analyzed using software software Epi-version 7.2 and Microsoft Office Excel 2013. We have respected the fundamental principles of medical research (confidentiality, no restriction of care even if a victim refuses to participate in the study) and the results of this study will only be used only in the context of research.

3. Results

The hospital prevalence of sexual assault on women in our study was 0.22% (107 victims out of 47,729 consultations) over eight (8) years, or about one sexual assault per month.

Socio-demographic characteristics are represented in Table 1. All of our survivors were female. The average age of the victims was 19 years old with extremes ranging from 0 - 30 years old. The most affected age group was 10 - 15 years old with 48.60% (52/107). Pupils were the most concerned with 53.27% (57/107) of cases, followed by unemployed women with 25.23% (27/107) then provided housekeepers with 17.76% (19/107) of cases. They were single in 93.46% (100/107) and married women in 6.54% (7/107) of cases.

The circumstances of the assault, the number and the relationship with the aggressor are summarized in Table 2.

The attack was carried out by a single attacker in 60.75% (65/107) of cases and collectively in 39.25% (42/107) of cases. More than half of the attacks 54.20% (58/107) had taken place at the home of the attacker and that between 6p.m. and midnight. A no less important part of 22.40% (24/107) of aggression occurred in a public space. The victims knew their attackers in 42% (45/107) of the cases and had no affinity with the attacker in 58.4% (62/107). The aggressors who had a link with the victims were mainly: a boyfriend/friend 21.5% (25/107) of cases, a classmate 12.1% (13/107) cases, and a family member 5.7% (6/107). In addition, the interview of nine (9) detained aggressors had found the sexi style of dress as a factor inciting aggression.

The clinical aspects described in Table 3. The majority of assaults were heter-

osexual 90.65% (97/107) of cases and the victims had stated that there would have been vaginal penetration. In 7.48% (8/107) of cases were involved touching. The lesions were essentially genital and they were present in 44.85% (48/107) including 43.70% (21/48) of old hymenal deflorations against 27.00% (13/48) of recent deflorations. The other lesions were at the level of the vulva 27.00% (13/48), from the vaginal fornix 2.30% (1/48). No lesion was found in 55.14% (59/107) victims. More than one half of victims 53.27% (57/107) had consulted the health services within 24 h. In 42.99% of cases, the consultation took place between 25 - 48 hours after the sexual assault.

Table 1. Socio-demographic characteristics (N = 107).

Variables	N = 107	%
Age (years)		
0 - 4	2	1.87
5 - 9	11	10.28
10 - 15	52	48.60
16 - 19	37	34.58
20 - 25	3	2.80
26 - 30	2	1.87
Job		
Students	57	53.27
Domestic helpers	19	17.76
Unemployed	27	25.23
Street vendors	4	3.74
Marital status		
Single	100	93.46
Married	7	6.54

Table 2. Circumstances of aggression, number and relationship to the aggressor (N = 107).

Circumstances of aggression	Number	%
Chamber of the Aggressor	58	54.20
Public space	24	22.40
Leisure place	7	6.50
School/way to school	3	2.90
Location undetermined	15	14.00
Attacker number		
Single aggressor	65	60.75%
Multiple attackers	42	39.25%
Link to the attacker		
Buddy friend	23	21.5
Classmate	13	12.1
Member of the family	6	5.7
Family driver/Family caretaker	2	1.9
The teacher	1	0.9
No relation to the victim	62	57.9

Table 3. Clinical aspects (N = 107).

Type of sexual contact	NOT	%
Heterosexual with vaginal penetration	97	90.65
Attachment	8	7.48
Undetermined	2	1.87
Nature of genital lesions	***N = 48***	
Ancient defloration of the hymen	21	43.70
Recent Defloration of the hymen	13	27.00
Vulvar lesions	13	27.00
Lesions of the posterior vaginal ass	1	2.30
Time between sexual assault and medical visit		
1 - 12 p.m.	14	13.08
13 - 24 h	43	40.19
25 - 48 h	46	42.99
Undetermined	04	3.74

The information on the results of the additional examinations and the treatment are summarized in Table 4. Only a small proportion of the victims had reported the results of the assessments requested. The search for spermatozoa was only positive for one out of four cases.

The search for the Human Immunodeficiency Virus (HIV) in 30 out of 80 victims reported no positive cases. In our study, only one Hbs Ag positive case and one Hbs positive case Bordet-Wassermann (BW) were observed and attributable to their previous condition.

To rule out pregnancy, twenty-eight beta-HCG tests were performed, three of which were positive. 42.06% of the victims in our series had benefited from an emergency contraction with levonorgestrel while antiretroviral prophylaxis and antibiotic therapy had been activated in only 26.17% of survivors. Surgical repair associated with antibiotic therapy only involved 5 patients (4.68%).

4. Discussion

Sexual assault is a major social problem, the main victims of which are women and children. According to world health organization (WHO), the annual rate of sexual assault in the world can reach 800,000 people, and its prevalence is poorly known. In the USA, its frequency varies between 15% and 25% of the female population in France, over one year 553,000 women aged 20 to 69 report having been victims of at least one sexual assault other than rape (sexual touching, breasts, buttocks and exhibition) and 62,000 women say they have been raped [5]. This violence is on the increase in Africa, the incidence of which varies from 0.4% to 4.4%, as several authors report, this increase is sometimes related to the democratization of social networks [6]. Our study found a low prevalence rate 0.22% (107/47,

Table 4. Paraclinical and therapeutic aspects (N = 107).

Paraclinical assessment	Examinations requested	Examinations carried out	Results	
			Positive	Negative
Search for sperm	30	04	1	3
HIV serology	80	30	0	30
HBS-Ag assay	80	30	1	29
Vaginal swab	80	30	1	29
computer	80	31	1	30
Urinary βHCG	70	28	3	25
Pelvic ultrasound	15	03	01	02
Type of processing	**Number**		**%**	
Emergency contraception (Norlevo 1.5 mg)	Yes	45	42.06	
	No	62	58.54	
Antiretroviral (ARV) and antibiotic treatment	Yes	28	26.17	
	No	79	73.83	
Surgical and antibiotic repair	Yes	5	4.68	
	No	102	95.32	

HIV: human immunodeficiency virus; **NB:** Bordet-Wassermann; **βHCG:** beta chorionic gonadotrophic hormone; **ARVs:** antiretrovirals.

729) victims of sexual assault in 8 years, *i.e.*, one assault per month. The same trend has been reported in several studies with frequencies of 0.2% in Burkina Faso [7], 1% at the Regional Hospital of Ziguinchor [8], 1.86% at the Yopougon University Hospital [1]. Our frequency was lower than that of Kayes hospital in Mali (2.15%) [9], of Togo 4.53% [10], of the Guinea Conakry (16%) [6]. In Switzerland, the Optimus study on the sexual victimization of minors (Averdijk, Eisner & Müller-Johnson, 2011), reveals that 22% of Swiss underage girls have already been victims of unwanted physical sexual contact at least once during of their life [11]. This low prevalence of sexual abuse in our countries would reflect the under-reporting of cases due to the influence of socio-cultural principles that make it a taboo subject, from the familiar links often found between victims and aggressors, to the low coverage of the region. Holistic case management structures, in particular the One Stop Center explaining the silence around this drama.

According to the World Health Organization (WHO), the reasons for this underreporting among others, inadequate support systems, shame, fear, risk of reprisals or being accused [7].

- **Age:** The average age of our victims was 19 years old and the most affected group was 10 - 15 years old 48.59% (52/107) our average age was higher than that of ADJOUSSOU. Stephane *et al.* [1] with an average of 14 years and the under 15 years weighted 67% of the cases but comparable to that of Dembélé S. *et*

al. [9] in Kayes with a average age of 17.5 years and the age group 10 - 19 years was the most represented with a frequency of 80.40% of cases. Our results were identical to those reported in other African studies where sexual assault was more pronounced among minors. This is how: in Cameroon, the majority age represented varied from 10 to 15 years (25.2%) [12], in Guinea Conakry the average age of the victims was 8 years old with extremes of 5 and 56 years [6]. This was 16 years with extremes ranging from 03 years to 32 years in Burkina Faso [7]. The same age group of 10 to 15 years was reported in Togo by Akila Bassowa *et al.* [10] with 26.6%. In Zinginchor, as in Dakar, the victims had an average age of 12.33 ± 6.28 and 13 years respectively [8] [13]. The frequency of this target is due to its vulnerability on the physical plane and its naivety. Children have no decision-making power in our society, they are most often exposed to submission by blackmail or threat.

-**The profession of the survivors:** Pupils were the most concerned with 53.27% (57/107) of cases, followed by unemployed women with 25.23% (27/107) then provided housekeepers with 17.76% (19/107) of cases. The same trend was reported by an earlier study in Mali (62.75%) of students and (19.60%) [9] of household helpers. Our frequency of students was lower than those of the Ivory Coast (56.8%) [1], from Togo [10] with 82% case.

As for household help, our frequency was superimposed on that of Togo with 18% domestic maize lower than that of Burkina Faso (21.9%) [7] [10].

In Cameroon, students controlled 61.4% of survivors [12]. Other studies such as that of J. Pobanou Thera *et al.* [14] to Mali available you found respectively 48.6% of students and 8.1% of housekeepers. The socio-professional status of these two categories of survivors makes them very vulnerable in our society. They share adolescence as a common risk factor. The vulnerability of housekeepers can be explained by their ability to perform all domestic tasks and even the sexual abuse to which they are subjected. In our study, the aggressors of housekeepers consisted of the older children of the family, guardians or drivers, and often the head of the family. As for the student victims, the interview with the aggressors told us that their physical appearance and dress exposing nudity were their incitement factors to the aggression.

- Marital status: Our survivors were single people in 93.46% (100/107) of cases as in Congo Brazzaville where they were mostly single (87.2%) [5].

- **Circumstance of aggression:** In Table 2, we described the data relating to the circumstances of the attack. More than half of the attacks 54.20% (58/107) had taken place at the home of the attacker and that between 6p.m. and midnight. This poses the recurring problem of insecurity related to insufficient electrification in our cities. A no less important part of 22.40% (24/107) of aggression occurred in a public space. Unlike our series Adjoussou Stéphane *et al.* en RCI [1] brought in the maximum aggression (69.8%) in a place familiar to the victim, as in the study by Adama-Hondégla *et al.* [15] in Lomeorsexual assault was perpetrated by a single individual in 96.5% of cases in an environment fa-

miliar to the victim (home, school, workplace, market, church). The schedules of assaults in the Ivorian series were similar to ours in 38.3% of cases (18 - 24 hours). The different times and places of sexual violence reported in the literature vary greatly from one study to another, thus Dakar in the study by DIALLO D. *et al.* [13], the sexual assaults occurred alone (84.3%) in the family home of the victim (29.3%), during the day (73.6%) of the cases.

In Gabon, according to Mohamed Maniboliot Soumah and Col. [16], 40% of assaults occurred at the aggressor's home, others occurred at the victim's home (29.1%) or in the street (18.2%). Also 12.7% of attacks were committed in the bush, in abandoned offices or behind the victim's home. Most assaults were committed at night between 6p.m. and 7a.m. (67.5%) of cases and 32.4% during the day.

Quantity in Mali Traoré Y *et al.* [17], had found nearly 3 out of 4 assaults occurred at night. The number of aggressors was unique in 60.75% (65/107) of the cases in our study (**Table 2**), our result was super imposable to previous Malian studies where the aggressor had acted alone in the majority of cases with 92.16% in Kayes [9], 89.2% in the study by J. Pobanou Théra *et al.* [14]; 65.54% in the series of Traore Y. *et al.* [17]. The same trend has been reported in other African studies such as in Côte d'Ivoire (81.6%) [1], in Burkina Faso (75.3%) [7], in Togo (88%) [10] Cameroon (93.6%) [18], in Senegal (84.3%) [13].

The victims knew their attackers in 42% (45/107) of the cases and had no affinity with the attacker in 58.4% (62/107) of the cases (**Table 2**). The attackers who had a link with the victims were mainly: a boyfriend/friend 21.5% (25/107) of cases, a classmate 12.1% (13/107) cases, a family member 5.7% (6/107) cases including an assault committed by head of the family. Our result is in agreement with the Burkinabè series [7] who had found 47.95% of identified attackers against 52.05% of unknown attackers. Contrary to our study where the majority of attackers were unknown, in the Ivorian series [1], the identity of the attackers was known in the majority of cases (60.2%) and in almost a third of cases (26.2%) the perpetrator was a neighbor or family friend [1]. Just like in Senegal and Mali DIALO D. *et al.* [13] as well as Traore Y. *et al.* [17] were reported respectively 75% and 63.67% of known attackers. In the study of D. Mbassa Menick [19] 16.6% of sexual violence was within the family (incest). The literature review shows that most often the aggressors were people close to the victim's entourage. Thus in a Cameroonian series 49% of the aggressors were known, it was either a family link in 22% of cases (father, brother, uncle, husband, cousin), a neighbor in 12, 6% of cases or a classmate in 5.5% of cases [12]. In Burkina Faso, it was a neighbor (24.66%), a comrade (10.96%), a relative (5.48%), a client (4.10%), his nurse or his friend (1.37%) each [7]. These data were similar to those of Gabon where the aggressor was known in 75% of cases, of which 39% were neighbours, 15% a family member, 11% a family friend, 8% (a guardian, uncle, father) and 2% another acquaintance [16]. The same observation was made by Ngo Meka Um *et al.* [18] with 70.2% of complicit sexual assaults by people close to the victim, in-

cluding a family member, neighbour, classmate or family acquaintance.

In Conakry of Guinea, in the majority of cases, the aggressor was known to the victim but was not part of the direct family circle (52.6%) [6].

-**Clinical aspects:** The majority of assaults were heterosexual 90.65% (97/107) of cases and the victims had stated that there would have been vaginal penetration; in 7.48% (8/107) cases involved touching. The lesions were essentially genital and they were present in 44.85% (48/107) including 43.70% (21/48) of old hymenal deflorations against 27.00% (13/48) of recent deflorations. The other lesions were at the level of vulva 27.00% (13/48), from the vaginal fornix 2.30% (1/48) (**Table 3**).

Our results were similar to most African studies with a predominance of vaginal penetration and genital lesions. Regarding the type of sexual contact, in Côte d'Ivoire, the mode of sexual abuse was vaginal penetration in 98.1% of cases. Clinically, 44.4% of patients presented with old hymenal rupture [1]. In the Malian series Traoré Y *et al.* [17] noted a notion of sexual penetration in 80.52% of cases against 19.48% of sexual touching. The lesions were: hymenal tears (13.48%), vulvar tears (7.87%) and tears in the posterior cul-de-sac of the vagina, on the other hand, the too long consultation period in their series did not allow highlighting traumatic lesions in 77.39% of cases. According to Dembele S. *et al.* [9] the vaginal route was the most found type of sexual assault with a frequency of 97.73% of cases against 11.77% of touching, 49% of victims had presentedarea genital lesion. This lesion was located at the level of the posterior vaginal fornix in 30.77% of cases. Moreover, in 90.20% of the cases the deflowering was old, this was explained by the fact that a significant part of the victims in their series had already had sexual intercourse before the attack. In Cameroon, vaginal penetration was the main form of aggression among survivors with respectively 85.0% in the series by Mboua Batoum *et al.* [12] and 85.1% in that of Ngo Meka Um *et al.* against 18.8% touching [18]. A genital lesion was objectified in 68.1% of the patients among whom the tears were more successful with 34% of the cases [18].

Results analysis in Guinea Conakry showed that in 31.2% of cases, it was recent defloration, more than half of the victims (54.2%) presented with old hymenal defloration. In 14.6% of victims, there was no hymenal defloration; the absence of defloration was explained by 2 hypotheses: either a perception of penetration without real penetration on the one hand, or the possibility of an apparently intact hymen despite the penetration) [6]. In Burkina Faso, the route of penetration was vaginal in 85.8% of cases. The gynecological examination revealed that the hymen bore old lesions in 57.7% of cases, recent lesions in 13.7% of cases and was intact in 28.8% of cases [7].

In two Togolese studies, rape by vaginal penetration (62.2%) was the predominant mode [15]. Old hymenal lesions were observed respectively in 79.5% and 42% of the victims [10] [15]. In Ziguinchor as in Dakar in Senegal the notion of genital contact with penetration was reported in respectively 74% and 79.3% the

victims [8] [13]. Also in the series of Ziguinchora hymenal tear was found in 60% of cases, 20% of which were recent [8]. The multiplicity of types of lesions in these different studies could be explained by the brutality with which the sexual act was committed in circumstances where the aggressor would like to quickly come to the end of his act before being surprised by a third person who would prevent him.

More than half of the victims 53.27% (57/107) of our samples had consulted health services within 24 hours. In 42.99% of cases the consultation was done between 25 - 48 h after the sexual assault. Our result was similar to that of Ngo Meka Um *et al.* [18] in Cameroon with 51.2% of victims who had come for consultation in the first 24 hours following the attack, higher than those in Togo with respectively 10.4% [10] and 2.4% [15] brought in for consultation within the first 24 hours following the rape. The same delay was reported by Yobi. A *et al.* [7] in Burkina Faso in 53.4% of survivors, 40.7% in Congo Brazzaville [5] and 30% in Senegal [13].

The even longer delay in Guinea Conakry with 56% of victims who had consulted during the first 5 days following the attack against 44.2% for those who consulted after the 5th day of the attack with extremes were of 08 hours and 30 days.

These consultation times remain if we compare them to ours. This long delay could be explained by the young age of the victims who tend to hide their misadventure on the one hand, on the other hand by the influence of the environment and the links with the aggressor.

Our relatively short delay compared to Guinea was explained by the fact that the majority of our survivors were handed over by the police on requisition.

- The paraclinical and therapeutic aspects: Those the data are summarized in **Table 4**. Compared to the assessments, only a small proportion of the victims brought back the results of the assessments requested. This low percentage is an indicator of the low economic power of the population which does not benefit from any subsidy for care (low involvement of care structures), but also the entourage of victims who are sometimes unaware of the seriousness of the risk of sexual assault.

The search for spermatozoa was only positive for one out of four cases (**Table 4**). Traore Y. *et al.* [17] had reported four (4) out of six (06) cases of positive spermatozoa; in Burkina, Faso Yobi A. *et al.* [7] noted the presence of spermatozoa in 6 out of 26 cases; in Ziguinchor [8], the search for spermatozoa had shown the presence of dead forms in two cases and living forms in one patient. The too long delay between the sexual act and the consultation, the intimate toilet before the consultation explained the difficulties of highlighting the spermatozoa in our study.

The search for acquired Human Immunodeficiency Virus (HIV) in 30 out of 80 victims reported no positive cases (**Table 4**). Like our study, no case of positive HIV serology was reported by J. Pobanou Thera *et al.* [14] in Mali and by

Ngo Meka Um *et al.* [18] in Cameroon. Our result is different from those of Yobi. A *et al.* [7] in Burkina Faso with one (01) case, dyou TogoorAkila Bassowa and Coll [10] and Adama-Hondegla *et al.* [15] were reported respectively 2 and 9 cases from star HIV-positive rology. In our study only one positive case of Ag Hbs and one positive case of BW were observed and attributable to their previous state against respectively 5 cases in Burkina Faso [7], 2 cases in Togo [ten]. On the other hand J. Pobanou Thera *et al.* [14] in his series found no infection. Our difference could be partly explained by the short consultation times before seroconversion and the lost sight of after their consultation.

We performed the urinary immunological pregnancy test in 28 victims, 3 of whom were positive. In Togoin the seriesby Akila Bassowa *et al.* [10] beta HCG plasma assayatic (βHCG) was positive in a 15-year-old patient, in whom ultrasound revealed an ongoing pregnancy of 9 weeks, while in that of Adama-Hondegla *et al.* [15] eight patients aged 11 to 16 were found pregnant from the first consultation after the attack. The same trend was reported by Mbaye Magatte *et al.* [8] in Ziguinchor where the ultrasound had confirmed six cases of suspected pregnancies on examination and they were an evolving mono-fetal intrauterine pregnancy of 17 weeks of amenorrhea (SA), 19 SA, 21SA, 24 SA, 31 weeks respectively, SA and 32SA.

Sexual assault with penetration raises fears of the risk of a transmissible disease such as HIV, for which the victim must benefit from antiretroviral prophylaxis according to current recommendations as soon as possible and up to 48 hours. The risk of pregnancy should not be forgotten after checking the level of beta-HCG; for this, a treatment based on Norlevo® (levonorgestrel 1.5 mg) per os will be offered as soon as possible [20].

This is how 42.06% (45/107) of the victims in our series had obtained an emergency contraction with levonorgestrel while antiretroviral prophylaxis and antibiotic therapy had been activated in only 26.17% of survivors.

The same prophylaxis was carried out in Togo [10] with respectively 34% of cases of emergency contraception, 72.3% of ARV prophylaxis; 80.9% antibiotic prophylaxis, in Senegal [13] 20.7% emergency contraception, 40% antibiotic prophylaxis. In Burkina Faso [7] and in Cameroon [18] Iantibiotic was prescribed in 31.5% and 80.9% of cases respectively, emergency contraception in 35.6% and 34% of cases, antiretrovirals in 48% and 34% of cases.

Apart from medical treatment 4.68% (5/17%) (**Table 4**) of our survivors provided corrective surgery. In the Traore series, Y *et al.* [17] the suture concerned six (06) cases (2.25%) of tearing of the posterior fornix of the vagina and a suture of a vulvar tear in a patient in Ziguinchor [8].

The difference in prophylactic treatments in these different studies could be partly explained by the delay in consultations and the availability of ARVs.

- **Follow-up of survivors:** A first appointment of one month was fixed for the verification of the HIV serology and the pregnancy test in the survivors, then another appointment at three months for the verification of the HIV serology.

Of the 30 victims in whom an initial search for the human immunodeficiency virus had been carried out, none had honored the check-up appointment. Those losses of sight could be explained on the one hand by the negative result of the first HIV test which apparently gave confidence, on the other hand the amicable settlement of disputes which occupies an important place in our country. The positive Hbs Ag and BW cases were transferred to the infectious diseases department. Due to the lack of a psychologist in our hospital, no survivor was able to benefit from psychological care.

5. Conclusion

Sexual assault continues to be a major public health problem in Mali, the phenomenon is growing. Insecurity is the main factor contributing to the proliferation of this scourge in our country. Children and adolescents were the most vulnerable groups. Their management, although codified in Mali, must be early, adequate and multidisciplinary. Prophylactic measures against infections and unwanted pregnancy consists in the administration of ARVs, recommended drugs and emergency contraceptives.

Conflicts of Interest

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

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