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Research Article

Retrospective Study of Intentional Injuries in the Health Referral Centre of the 4th Commune of Bamako (Mali)

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Abstract: Intentional injuries constitute an infringement of the physical integrity of human being. They represent a breach of the criminal law. The objective of our work was to study their clinical and legal aspects in Bamako. It was a retrospective study performed in the health referral center of the 4th commune of Bamako (capital of Mali) from June 1st 2006 to December 31th 2008. The study included 196 patients. The age range of 16 - 25 years was more involved (, 41.8 %), followed by the age range of 11-20 years (34.7 %). Females were more injured (52.5 %) than males (47.5 %) . Among the traumas, we had: 118 cases of bruises (60.2 %), 77 cases of wounds (39.3 %) and 1 case of fracture (0.5 %). The duration of the total work inability ranged from 1 to 20 days (58.7%). Legal proceedings were brought against the perpetrator in 8.2% (n= 16).
Keywords: Intentional, Injuries, Legal proceedings.

INTRODUCTION

The World Health Organization (WHO) defines violence as "The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation" [1].

The violence is a phenomenon of society and represents a significant policy issue. The consultation of the victims of assaults aims to issue a certificate, including the duration of personal work inability which plays an important role in legal proceedings. Moreover, the forensic Doctor is the primary author at the center of this consultation, because he is supposed to know more accurately the legal issues; so he must be a good clinician to identify the injuries [2, 3].

The intentional injuries or assaults are offenses of different gravity punished by the criminal law. With regard to facts which alter the physical and mental health of the victims, the judiciary naturally relies on the medical practitioner to enlighten him on the violence and its consequences. This form of collaboration between medicine and justice is materialized through the medical certificate. The knowledge of the legal consequences of the medical certificate is fundamental; the doctor must report accurately the injuries [4].

A bad clinical examination will lead to an inappropriate evaluation of the work inability. In addition, very often, the seriousness of some trauma is not obvious and must therefore be looked for thoroughly. For all these reasons, the examining Doctor must be vigilant in research and description of the injuries. Also, further investigations as well as the psychological state of the victim must be taken into account [5].

In Mali, the parliament through the criminal code [6] punishes severely the perpetrators of assaults. In the provisions the article 207 of Malian criminal code: "any individual who, voluntarily injured or committed any other violence or assault can be jailed for one to five years; if a mutilation occurs, or there is a premeditation, the assaulter can be sentenced up to 20 years or to life prison.

Assaults are underestimated in Mali; therefore the objective of our work was to study their clinical and legal aspects.

METHODOLOGY

It was a retrospective study performed in the health referral center of the 4th commune of Bamako (capital of Mali) from 1st June 2006 to 31st December 2008. The 4th commune represents 17% of the population of Bamako and 2% of the population of Mali. Its population in 2008 was estimated at 245. 425 inhabitants, of whom 51% are men and 49%, are women.

Our data were collected from the patients' medical files and the medical certificates. The patients who were included in our study were those received from 2006 to 2008 for voluntary injury. Patients whose data were unusable have not been included in this study.

We studied as parameters: the age, sex, occupation, the mode of admission, the nature of the injuries, the site of the lesions, the circumstances of the injury, the period of consultation, the nature of the injuries, the nature of the traumatic agent, the duration of the total work inability, the legal proceedings.

The data were analyzed with the software SPSS 12.0 Windows 2007.

RESULTS

Age

The age range of 16 - 25 years was more involved (41.8 %) followed by the age group of 11 to 20 years (34.7 %). The distribution of our patients according to age group is represented in the table 1.

Sex

Females were more injured, 52.5 % (n= 103) than males, 47.5% (n= 93), with a sex ratio of 0.9.

Occupation

Housewives were most involved, 25.5% (n= 50), then came the laborers and traders with respectively 22.4 % and 19.9 %. The other occupational categories were the students, 19.9% and the vigils, 11.2%.

Traumatic Agent

Non firearm weapons were the most used, 99% (n= 194); among them the punch represented 57.9 %, the kick, 31.1 %, the stick, 8.3 %, the knife 1.7 %. Firearms accounted for 1% (n= 1).

Nature of injury

The clinical examination, using the slit lamp; investigations using the standard x-ray scan or the Computerized Tomography Scan (CT-Scan) allowed the diagnosis of: 118 cases of bruise (60.2 %), 77 cases of wounds (39.3 %) and 1 case of fracture (0.5 %). Figure 1 (bruise by assault in a merchant of 36years following a brawl) illustrates the nature of the injuries.

Site of injuries

The head/face was the site the most involved, 37.8 % (n= 74). The other sites were: the thorax, 57 cases (29.1 %), the limbs, 56 cases (28.6 %), the abdomen, and 9 cases (4.5 %). The distribution of the patients according to the site of injury is represented in table 2.

Circumstances of injury

Brawls accounted for 94.9 % (n= 186) and family violence 5.1% (n= 10).

Duration work inability

The duration of work inability ranged from1 to 20 days in 58.7%. 29, 1% (n= 57) of the patients had no work inability; whereas in 24 patients (12.2 %), the work inability was above 20 days.

Legal proceedings

A lawsuit has been initiated against the perpetrator in 8.2 (n= 16).

Table 1: Distribution of patient according to their age

Age (year)	N	%
0-10	2	1.0
11-20	68	34.7
21-30	82	41.9
31-40	30	15.3
41-50	8	4.1
51-60	4	2.0
>60	2	1.0
Total	196	100.0

Table 2: Distribution of patients according to the site of injury

Site of injury	N	%
Head/Face	74	37.8
Thorax	57	29.1
Limbs	56	28.6
Abdomen	9	4.5
Total	196	100.0

Fig. 1: Orbito-facial bruise by assault in a merchant of 36 years following a brawl

DISCUSSION

Of the 196 patients injured, 52.5 % (n=103) were females and 47.5 (n=93) were males. This rate is lower than that of Khante who otained in Bamako 38% of females out of 106 patients [7].

By contrast it is higher than the rate obtained by Diaw in 1998 in Dakar, 11% of females [8].

In our study females were more exposed to injury; this could be explained by the fact that they represent the sex considered as "weak" in our society.

Most of our patients were young; the age group most affected was 21-30 years, with a frequency of 41.8% followed by the age group 11- 20 years with 34.7 %.

This frequency is similar to that obtained by most of the authors: Diallo in Bamako found for the age group 25- 35 years, a frequency of 40.98% [9]. Diop in 1991 in Dakar found 45.7% of patients ranged from 11-20 years [10]. Benyaich *et al*. in Morocco found in the age group 20- 29 years, a rate of 40.0% [4].

Khante in Bamako found a frequency higher than ours (67.57 %) in the age group 10- 30 years [7].

The high frequency of injuries in young people could be explained by the fact that, they are commonly involved in fights, which exposes them to blows and injuries.

The socio-professional category most involved was the housewives with 25.5 %, followed by the laborers with 22.44 %.

This frequency is comparable to that obtained by Diallo in Bamako with a frequency of 21.5 % for the category of laborers [10].

By contrast it is lower than those obtained by other authors: Assalit obtained 40.93% for the category of laborers in 1995 in Toulouse [11]. Tourmant obtained for the category of laborers a frequency of 70.0% in 1996 in Lyon [12].

Our result could be explained by the fact that, the vast majority of the population is constituted by these two socio-professional categories.

Only 8.1 per cent of our patients were admitted on judicial requisition; the vast majority of victims were received on their own request.

This could be explained by the fact that in our society most disputes are settled without the involvement of the judicial authorities; but also by the ignorance of the law.

As regards the applicant authority, the judicial police was the most represented with 93.7 %.

This result could be explained by the fact that the police stations are close and easy access to the population.

About the nature of injuries, bruises were predominant with a frequency of 60.2 %, whereas wounds accounted for 39.3 %; this frequency is higher than those obtained by other authors: Benyaich *et al*. in Morocco obtained a frequency of 51.0% for the bruises, whereas Diallo in Bamako obtained a frequency of 41.7% of bruises [4, 9]. Diaw in 1998 in Dakar found in his study a frequency of wounds greater than ours, 83.0 % [8].

The head represented the site the more involved in trauma with a rate of 37.8 %; this rate is lower than those obtained by: Khante in Bamako who obtained a rate of 44.34% [7]; in Morocco Benyaich *et al*. obtained a rate of 78.0% [4]; Benzacken *et al*. *et al*. [13] in France obtained a rate of 75.0 %; Bomou in Bamako obtained 37.83% [14].

This rate could be explained by the fact that the head is much more easily accessible during traumatic assault. In our study, the circumstances were the brawls in, 94.9 % (n= 186); 5.1 per cent were family violence (n= 10).

Our results are different from those of Mary in 1994 in France who obtained a rate of 71.78 per cent for the family conflicts [15].

The violence is in increasing throughout the world, this fact could explain the relatively high frequency of assaults.

Non firearm weapons accounted for 99% of the traumatic agents; this rate is higher than those obtained by many authors: Khante found a rate of 64.15 in 2000, in Bamako [7]. Kendja *et al*. in 1993 in Treichville obtained 67.20 per cent [16]. Saidi *et al*. obtained in Morocco 44.0 % of assault and injury caused by non firearm weapons [17].

Non firearm weapons are easily accessible, because they can be natural or prefabricated; that's why they are relatively frequent in this study.

In our study, only 8.7 per cent of the victims benefited from an initial medical certificate.

This low rate of issuance of medical certificate could be explained by the ignorance of patients who do not know that they have the right to claim a certificate; but also by the scarcity of judicial complaints.

The total work inability ranged from 1-20 days in 58.7 %. This duration is lower than that obtained by Benyaich *et al*. in Casablanca; because in their study, 81.5 % of work inability did not exceed 20 days [4].

Only 8.2 per cent of the perpetrators were prosecuted. But none of them was convicted.

This rate is lower than that obtained by Lagrange H in 2000 the Ile de la Reunion, with a rate of 36% of prosecution [18].

The kinship that exists between the victim and the perpetrator would explain the relatively low rate of prosecution.

CONCLUSION

Intentional injuries are relatively frequent in forensic practice in Mali. The young females are the most injured, particularly housewives. The work inability is quite important. An awareness of the population and the prosecution of authors of assault by the judiciary are necessary.

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