Articles

Domestic Violence
Risk Factors and Outcomes

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Domestic violence is a pervasive and frequently unrecognized cause of injury among women. We reviewed data from standardized interviews with 218 women who presented to an emergency department with injuries due to domestic violence. Victims ranged in age from 16 to 66 years and constituted a wide range of socioeconomic and ethnic backgrounds. Domestic violence often resulted in severe injury; 28% of the women interviewed required admission to hospital for injuries, and 13% required major surgical treatment. The typical presentation was injuries to the face, skull, eyes, extremities, and upper torso. A third of the cases involved a weapon, such as a knife, club, or gun. In all, 10% of the victims were pregnant at the time of abuse, and 10% reported that their children had also been abused by the batterer. Most victims (86%) had suffered at least one previous incident of abuse, and about 40% had previously required medical care for abuse. Victim recognition and referral to appropriate agencies could be improved if primary care physicians were more aware of the prevalence, severity, frequency of occurrence, and typical presentation of domestic violence.

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Domestic violence, specifically abuse by an intimate partner, is a pervasive and frequently unrecognized cause of acute and chronic illness among women. Population-based studies suggest that some form of violence occurs each year in 16% of relationships, and in 6% it is severe—such as punching, kicking, biting, beating, and attacks with a gun or knife.[1] In California, domestic disputes cause one of every three homicide deaths among women (Federal Bureau of Investigation, Uniform Crime Reports, 1982). Injuries due to domestic violence place an enormous strain on health care resources, accounting for an estimated 20% of all emergency department visits by women[2] and 29% of all suicide attempts by women.[3] Domestic violence also burdens community service agencies, with as many as 41% of all assault-related calls to the police attributable to domestic disputes (compilation of San Francisco Police Department dispatch records by the San Francisco Family Violence Project, 1981).

Little information is currently available to differentiate those at high risk for injury due to domestic violence and to guide medical and legal professionals and social scientists in designing effective intervention strategies. Only a few reports have appeared in the medical literature, primarily studies of small numbers of victims of severe abuse[4-9] or questionnaire surveys designed to estimate the prevalence of abuse.[1] Much of the published information on risk factors for and outcomes of domestic violence is based on reviews of emergency department records and evaluations of unconfirmed ("probable" or "suggestive") cases of domestic violence.[2,10]

To describe the risk factors for and outcomes of domestic violence, we analyzed data from standardized interviews with 218 victims of domestic violence who sought assistance from the Emergency Department at the San Francisco (California) General Hospital Medical Center. These records, obtained by the staff of the San Francisco Family Violence Project, provide detailed, objective, and uniform information on a large number of cases of domestic violence.

Methods

Since 1983, all women who presented for medical care at the San Francisco General Hospital Medical Center with a chief complaint of injury as a result of domestic violence or who reported to hospital staff that they were victims of domestic violence have been referred to the San Francisco Family Violence Project, an agency established to provide social, legal, and psychological support to victims of domestic violence. The staff of the Family Violence Project completed standardized data forms during structured personal inter-

TABLE 1.—*Age, Race, and Income of Victim (n=218) and Batterer*

Demographics	Batterer No.	Batterer (%)	Victim No.	Victim (%)
Age, yr				
16-25	40	(18)	69	(32)
26-35	88	(40)	91	(42)
36-45	42	(19)	31	(14)
46-55	15	(7)	18	(8)
56 or older	9	(4)	4	(2)
Unknown	24	(11)	5	(2)
Race				
Asian/Pacific Islander	21	(10)	31	(14)
Black	91	(42)	82	(38)
Latino/Hispanic	38	(17)	41	(19)
White	28	(13)	51	(23)
Other	6	(3)	5	(2)
Unknown	34	(16)	8	(4)
Income				
Employed			59	(27)
General Assistance/SSI			59	(27)
Unlawful activities			19	(9)
Batterer			16	(7)
Family			2	(1)
Unknown			63	(29)

SSI = Social Security Insurance

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TABLE 2.—*Type and Duration of Victim-Batterer Relationship*

Type of Relationship	No.	(%)	Median Duration in Years (Range)
Girlfriend, current or former	112	(51)	2.8 (0.1-15.0)
Ex-wife	6	(3)	5.5 (2.0-11.0)
Wife	91	(42)	5.0 (0.2-30.0)
Not recorded	9	(4)	
All	218	(100)	3.0 (0.1-30.0)

TABLE 3.—*Abuse History*

Interview Question	No.	(%)*	% Not Recorded
Previous incidents of abuse	187	(86)	3
Requiring medical attention	87	(40)	10
Requiring hospital admission	29	(13)	12
Ever abused while pregnant	66	(30)	11
Ever miscarried due to abuse	11	(5)	16

*Percentages total >100% because some women came under more than 1 category.

views of several hundred victims of domestic violence.* These data describe the victim, the batterer, the victim's children, and the injuries incurred.

A total of 492 records were available for inclusion in the study. Cases in which the record was less than half completed (n = 264) and cases other than men battering women (n = 10) were excluded from the study. Questionnaires were incomplete primarily because the victim declined or was not available to complete the interview. Results are based on the remaining 218 cases. Means, standard deviations, medians, and ranges were calculated using the Statistical Analysis Software package.

Results

The 218 women interviewed ranged in age from 16 to 66 years (median age 29 years, standard deviation 10 years). Both victims and batterers were ethnically heterogeneous, reflecting the ethnically diverse population of San Francisco. About a third of victims were employed and about a third received public assistance. Only 16 women (7%) listed their primary source of financial support as the batterer (Table 1). The age of the assailants ranged from 19 to 72 years (median 31 years, SD 10 years).

In the overwhelming majority of cases, the victim was related to the batterer as a current or former girlfriend (51% of cases) or as wife (42%). The duration of the relationship between the victim and the batterer ranged from 1 month to 30 years, with a median of 3 years (Table 2). At the time of the incident, 67% of the victims were living with the batterer. In 48% of the cases, the batterer was described by the victim as having an alcohol or drug problem, and, in 43% of the cases, alcohol or drug use was reportedly involved in the index episode of abuse.

For the vast majority of the victims, the incident was not the first episode of abuse in their relationship. At least one previous episode of abuse was reported by 86% of the victims, 40% had required medical attention for abuse in the past, and 13% had required hospital admission for previous abuse. In addition, 10% of the victims reported that they were pregnant at the time of abuse, 30% reported that they had been abused during a previous pregnancy, and 5% stated that they had miscarried because of abuse; 16% of the victims reported that they had attempted suicide (Table 3).

Of all women interviewed, 28% were admitted to hospital for treatment of injuries, and 13% underwent major surgical intervention. Victims frequently required radiographic studies (41%), stitches or casting (25%), and medications (27%). Some had loss of consciousness (11%) or permanent injury (disfigurement, hearing loss, or visual impairment; 5%) resulting from the abusive episode. In addition to bruises (70%), the victims frequently suffered lacerations (39%), choking or strangulation (23%), musculoskeletal injuries (such as bone fractures, tendon or ligament injuries, or joint dislocations; 25%), and internal injuries (13%) (Table 4). Frequently assaulted areas of the body included the face, skull, eyes, upper trunk, and extremities (Table 5). A third of the cases involved a weapon, such as a knife, club, or gun (Table 6).

In 51% of the cases of violence studied, children lived in the household where the violence took place; in 35%, one or more children had witnessed the abuse. In 10%, the victims reported that their children were also abused by the batterer.

Discussion

In the past, attempts to describe domestic violence have used unstructured interviews with victims or medical record reviews of suspected cases. We have presented data documenting incidents of domestic violence among 218 victims through structured interviews on standardized forms, thus minimizing observer bias and the interpretation of responses. Information on half of the eligible cases was not sufficiently complete for inclusion in the study. The effect of this selection bias is uncertain; the most severe cases may have been preferentially documented, or, alternatively, severely abused women may have been too ill or fearful to give full information.

TABLE 4.—*Types of Injury*

Injury	No.	(%)*	% Not Recorded
Bruises	152	(70)	13
Laceration	86	(39)	3
Musculoskeletal injury	54	(25)	4
Choking	49	(23)	4
Internal injuries	29	(13)	5
Loss of consciousness	23	(11)	22
Permanent injury	10	(5)	22
Burn or scald	3	(1)	4

*Percentages total >100% because some women had more than 1 type of injury.

TABLE 5.—*Location of Injury*

Location	No.	(%)*
Face	149	(68)
Extremities	107	(49)
Skull	104	(48)
Eyes	97	(45)
Chest, ribs, upper back	97	(45)
Abdomen, pelvis, lower back	42	(19)
Sexual assault	25	(12)
Neck	12	(6)

*Percentages total >100% because some women had injuries in more than 1 location.

*The staff of the San Francisco Family Violence Project collected the data on which this study is based. Ms Debbie Lee, Senior Program Specialist, and Ms Esta Soler, Executive Director, advised and assisted in this study.

TABLE 6.—*Weapons Used During the Abuse Episode*

Weapon	No.	(%)
Household object	29	(13)
Knife	23	(11)
Stick or club	15	(7)
Gun	4	(2)
Other	1	(0.5)

Our findings indicate that the victims of domestic violence represent all major racial groups and range widely in age. Compared with previous studies,[2,4,9] a considerably larger proportion of victims in this study were nonwhite (77%), but the proportion of women seen in the Emergency Department of San Francisco General Hospital Medical Center who are nonwhite is also high (73%). Abuse occurred among women of all races, and the possibility of domestic violence as the cause of injury in women should be considered, regardless of ethnic background or age.

Several authors have suggested that battered women may remain in an abusive relationship because of financial dependence on the batterer.[2,11] In our study, only 7% of victims were dependent solely on their attacker for financial support. About a third of victims were employed and thus had some financial ability to leave such a relationship. This suggests that for some women, other reasons, such as fear of injury or psychological dependence, deter them from leaving an abusive relationship.

Most intervention efforts are aimed at separating an abused woman from her batterer. Physical separation from the batterer, however, did not ensure protection for our subjects. Fully a third of the victims in our study were not living with their assailants at the time of the index episode, suggesting that victims of domestic violence need better police and judicial protection after leaving the abusive relationship.

Domestic violence is a source of considerable morbidity—28% of our victims were admitted to hospital for their index injury, and 13% required major surgical treatment. In addition, our results and those of previous studies[2,9,10] suggest that the number of abuse episodes may increase during pregnancy. Emergency department personnel and primary care providers should be aware of this association and inquire about domestic violence in pregnant women with injuries. Child abuse by the batterer was commonly reported in our study, suggesting that medical providers should also inquire about child abuse in this setting.

Our findings confirm reports that domestic violence is a recurrent problem.[2,11] In our study, 86% of the victims had been abused before, and almost 40% had previously required medical attention for abuse. Women who are victims of repeated violence in the home may go on to have chronic medical and psychological disorders, such as depression or alcohol and drug abuse. These chronic problems are usually the final stage in a syndrome of battering, preceded by numerous presentations for the medical treatment of injuries; outpatient clinic visits for vague complaints; and labeling as a neurotic, hysteric, or hypochondriac.[10] While no confirmatory data exist, an early recognition of the battering syndrome might decrease the incidence of these associated chronic conditions.

Even though it can result in catastrophic medical and social outcomes, domestic violence is frequently unrecognized or viewed as a "private" event by health professionals. Investigators have used medical record reviews to show that many cases of domestic violence are not recognized by medical providers.[1,12] Instituting victim recognition protocols in emergency departments has yielded significant increases (from 180% to 500%) in the detection of cases of battering and has consistently resulted in increased use of supportive services by battered women.[2,6,10,12]

Primary care physicians and emergency department personnel should consider the possibility of abuse in any woman presenting with bruises or lacerations of the head, extremities, or upper torso, especially those who have sustained such injuries previously. Health care workers should also suspect abuse in cases of pregnant women who are injured and women with injuries who are mothers of abused children. Anyone who wishes to learn more about local services available for victims of domestic violence can call the toll-free, nationwide, 24-hour domestic violence hotline, 800-333-7233 (telecommunications device for the deaf, 800-873-6363). Hospital protocols for providing services to victims of domestic violence can be obtained by writing to the San Francisco Family Violence Project, 1001 Potrero Avenue, Building 1, Suite 200, San Francisco, CA 94110.

The magnitude of the problem of domestic violence in our society and the severity of the injuries incurred argue strongly for its inclusion as a topic of study in medical school curricula, as well as for the implementation of hospital and outpatient protocols aimed at the identification and treatment of its victims. Diagnostic sensitivity and the referral of victims to appropriate agencies will be greatly improved if primary care physicians become more aware of the prevalence of domestic violence and more alert to its risk factors.

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