



Original Article

Causes and consequences of acid violence among the victims attended in specialized acid survivor center in Dhaka city

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ABSTRACT

Background: Acid burn injuries represent a special type of burn injury, with a pathophysiology depending on the type of acid, concentration, strength, quality, duration of contact, and penetration power. The consequence of acid attacks on survivors brings dramatic change in their lifestyle. The alarming increase of acid-throwing cases for the last 2 decades in Bangladesh is a cause of concern which led to its study.

Objective: To describe the causes and consequences of acid violence among the acid burn victims in a specific center of Bangladesh.

Methods: This is a cross sectional type of study conducted over a period of one year from December 2013 to November 2014 at Acid Survivors Foundation, Mirpur, Dhaka. 121 victims of acid violence were included in the study. Data collected by interviewing the patients using semi structured questionnaire which were later edited and analysed.

Results: Among the respondents 25.6% (n= 31) were in the age group of 11 – 20 years, followed by 24.8% (n= 30) in the age group of 31 – 40 years. Causes of Threw Acid is 40.4% (49) cases were due to refusal of love or marriage proposal, in 27.3 (33) cases were due to dowry. Majority of cases affected on chest (62.0%), upper limb (58.7%), face (53.7%), neck (47.9%), back trunk (27.3%), lower limb (24.8%), abdomen (24.0%). Out of 121 patients 62.85% (n=44) needed single surgery, 28.57% (n=20) needed multiple setting surgery and 56.2% heal with minor scar, 25.6% had neck contracture, 21.5% had deformity in face. 81.0% are suffering from both anxiety and depression, 11.6% from anxiety alone and 7.4% from depression alone.

Conclusion: A comprehensive effective, integrated, and gender specific medico-legal support for acid violence survivors should be ensured throughout the country.

Key words: Acid Burn, Acid Violence Survivor, Perpetrator

Introduction

Violence against women is the most pervasive human rights violation in today's world, which are the cause and the consequence of inequality and discrimination. Violence against women cannot be addressed in

isolation of context, including the historical, political, economic, social and cultural contexts and realities that impact and shape the lives of women.¹ The dimension of gender based violence encompass acid throwing, physical torture, mental abuse, sexual exploitation, rape, trafficking, domestic violence, dowry, deaths, suicide, forced marriage and other psychological and financial oppression.² Acid violence is one of the worst manifestations of violence against women. Acid attacks occur throughout South East Asia, especially in Pakistan, India, Cambodia and Bangladesh. Globally at least 1500 persons in 20 countries were attacked last year in this way, 80% of

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whom being females and somewhere between 40% and 70% under 18 years of age. In Bangladesh, acid throwing are mostly a form of domestic violence primarily targeted at women. It is a relatively recent form of violence.³ Acid violence is a barbaric form of violence in Bangladesh. Acid violence also called acid throwing or vitriol age, is defined as the act of throwing of strong corrosives on face and body of a person with the intention of causing permanent disfiguration, intense pain, scarring and sometimes blindness.

Materials and Methods

This is a cross sectional type of study conducted at Acid Survivors Foundation, Mirpur, Dhaka over a period of one year from December 2013 to November 2014. Study population was acid burn victims received treatment from Acid Survivors Foundation, Mirpur, Dhaka. To determine the sample size, the following formula was used; $n = z^2pq/d^2$ and sample size was taken 121.

Inclusion criteria

- Burn due to acid violence
- Already received treatment from hospital

Exclusion Criteria

- Severe burn patient who are not able to participate in this study

Data collection Instrument

A semi structured questionnaire was developed. Checklist was also developed for document review and observation. Hospital Anxiety and Depression scale was also used. After collection the data were checked; followed by editing and cleaning to detect errors or omissions and to maintain consistency and validity. Then the data were entered into the computer for analysis with SPSS.

Results:

Table 1. Distribution of acid victims by age (n= 121)

Age	Frequency(n)	Percentage (%)
Upto 10 years	10	8.3
11 - 20 years	31	25.6
21 - 30 years	27	22.3
31 - 40 years	30	24.8
41 years and above	23	19.0
Total	121	100.0

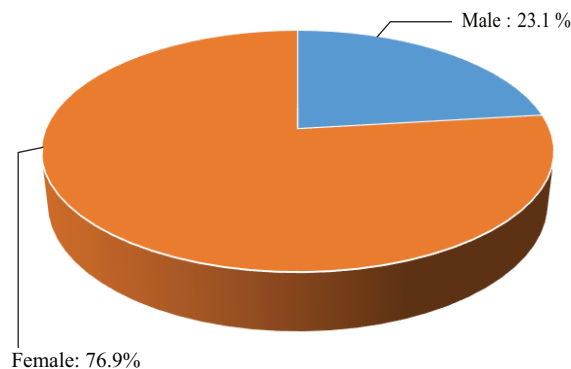


Figure 1. Distribution of acid victims by sex (n=121)

Figure shows that among the acid survivors 76.9% (n=93) were female and 23.1% (n=28) were male.

Table 2. Distribution of respondents by cause of acid violence

Cause of acid violence	Frequency (n)	Percentage (%)
Dowry	33	27.3
Land dispute	16	13.2
Refusal of love/ Marriage proposal	49	40.4
Family quarrel	21	17.4
Others	2	1.7
Total	121	100

Table 3. Distribution of respondents by family attitude after incidence

Family Attitude	Frequency (n)	Percentage (%)
Avoiding	19	15.7
Neglecting	65	53.7
Helping attitude	33	27.3
Try to protect	4	3.3
Total	121	100.0

Table 4. *Distribution of respondents by site of acid exposure*

Sites	Gender		Total
	Male	Female	
Face	13(16.9%)	52(17.9%)	65(53.7%)
Neck	11(14.3%)	47(16.2%)	58(47.9%)
Chest	15(19.5%)	60(20.7%)	75 (62.0%)
Abdomen	4(5.2%)	25(8.6%)	29(24.0%)
Back Trunk	7(9.1%)	26(9.0%)	33(27.3%)
Upper Limbs	20(26.0%)	51(17.6%)	71(58.7%)
Lower Limbs	6(7.8%)	24(8.3%)	30(24.8%)
Genitalia	1(1.3%)	5(1.7%)	6(5.0%)
Multiple responses			

Table 5. *Distribution of respondents by treatment after burn*

Treatment	Frequency (n)	Percentage (%)
Conservative	42	34.7
Dressing at home	9	7.4
Surgery	70	57.9
Total	121	100.0

Table 6. *Distribution of respondents by condition after treatment*

Condition after Treatment	Frequency (n)	Percentage (%)
Heal completely	4	3.3%
Heal with minor scar	68	56.2%
Heal with hypertrophic scar and keloid	23	19.0%
Deformity in face	26	21.5%
Neck contracture	31	25.6%
Hand contracture	7	5.8%
Deformity in limbs	13	10.7%
Permanent hair loss	2	1.7%
Eye contracture	7	5.8%
Loss of vision	5	4.1%

Table 7. *Distribution of respondents by legal action*

Survivors taken legal action	Frequency (n)	Percentage (%)
Yes	83	68.6
No	38	31.4
Total	121	100.0

Table 8. *Distribution of respondents by Psychological consequences after burn*

Psychological consequences	Frequency (n)	Percentage (%)
Anxiety	14	11.6
Depression	9	7.4
Both	98	81.0
Total	121	100.0

Discussion:

Current age range of acid survivor under this study shows that, 8.3% and 25.6% of survivors were respectively child and adolescent/teenager, which means dependent on parents or family members. Around half were of 21 – 40 years of age. Mean age was found as 28.59 ± 13.549 years. Female survivor were found more than male survivor. Among the participants, three-fourth (76.9%) were female, two-third of whom were married. Female survivors were mostly found as housewives (56.9%); only a few female were found involved in earning activities with their household activities. Study conducted in Iran showed that fifty percent of female patients were attacked by their husband's or relatives, the rest by strangers⁴. In Bangladesh 40.4 % (49) cases were due to refusal of love or marriage proposal, in 27.3 (33) cases were due to dowry, 17.4% (21) were due to family quarrel, 13.2% incidence occur due to land disputes. Study in Sri Lanka showed that commonly involved areas were the face (93%), chest (65%), and upper limbs (64%).⁵ In this study most injured five organs are chronologically- chest (62.0%), upper limb (58.7%), face (53.7%), neck (47.9%), back trunk (27.3%), lower limb (24.8%), abdomen (24.0%). In most cases of acid violence, disfiguring victims face was the main target of perpetrators. The mean duration of hospitalization was 13.7 ± 17.7 days; 15.5% were in an intensive care unit with a mean duration of 12.1 ± 17.1 days. About sixty percent (57.9%) needed

surgery, 34.7% needed conservative treatment, and 7.4% needed dressing at home after minor surgery.

Although 81% have no idea about legal action though 68% received legal action due to help of NGOs, Govt. support. It may be due to less suffering by males and both government and NGOs are in favor of females in Bangladesh. Acid violence causes not only the physical deformities and disability it causes other consequences like lack of security in the community, disrespect from family and community, avoiding tendency by colleagues and friends, lack of participation at social and cultural programs and hence increases the poverty.

Conclusion:

Acid violence is a particularly vicious and damaging form of violence in Bangladesh where acid is thrown in people's faces. The overwhelming majority of the victims are women, and many of them are below 18 years of age. The victims are attacked for many reasons. Acid is highly corrosive chemical that has a catastrophic effect on human flesh. The consequence of acid attacks on survivors brings dramatic change in their lifestyle. Most of them have to give up their education or work. Social isolation, fear of further attacks, and insecurity damage their self-esteem and confidence. Illiteracy, poverty, threats to further retribution, and ignorance about legal support increase their miseries. Social awareness, economic and psychological support, rehabilitation, and strict

enforcement of laws are key to combat acid violence in Bangladesh.

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