Spectrum of vitriolage in India: A retrospective data record-based study

Mohammad A. Khan¹, Rahul Katiyar², Manisha Verma³, Anoop K. Verma⁴

¹Department of Forensic Medicine and Toxicology, Hind Institute of Medical Sciences, Barabanki, Uttar Pradesh, India, ²Department of Community Medicine, Era's Lucknow Medical College and Hospital, Lucknow, Uttar Pradesh, India, ³Department of Periodontology, Faculty of Dental Sciences, King George's Medical University, Lucknow, Uttar Pradesh, India, Department of Forensic Medicine and Toxicology, King George's Medical University, Lucknow, Uttar Pradesh, India

ABSTRACT

Introduction: Vitriolage or acid attack or acid throwing is a gender-based terrible violent crime. There are many everlasting sequels of vitriolage which consist of permanent scarring of the face or body, blindness as well as socioeconomic and psychological intricacy. The sufferer of acid attack is competitor, hatred, enmity or jealousy. Vitriolage are most common in the Asian countries especially in south east Asian region followed by Europe and South America. Bangladesh, India, Pakistan, Colombia and Cambodia are the countries having the highest incidence of acid attacks. There is a sharp rise in vitriolage cases in India in the last few years as indicated by data from the National Crime Record Bureau (NCRB). Seventy per cent victims of vitriolage are women in India as indicated by the annual reports of the Acid Survivor Foundation. Aims and Objective: The aim of the study was to report incidence of acid attacks in India, Indian states and metropolitan cities. To analyse various police and court procedure and to discuss various steps to give justice to the victim of vitriolage. Materials and Methods: Present study is a retrospective data record-based study. Available data for the last 5 years (from 2017 to 2021) were taken from National Crime Report Bureau (NCRB). Available as per NCRB, data were analysed as per aims and objectives. Results: The trend of incidence of acid attacks in India was decreasing in the last 5 years, that is, the incidence was 244 in the year 2017 which become 176 in the year 2021. West Bengal and Uttar Pradesh were the states having the highest number of acid attack incidence during the last 5 years. Delhi city was the top most metropolitan city having the highest acid attack incidence in the last 5 years. Police investigation of cases of acid attacks against women and cases disposed of by the police decreased in the last 5 years. The chargesheeting rate was better in metropolitan cities than overall chargesheeting in India. There was an increased trial of cases of acid attacks against women and a decrease in cases disposed of by the court during the last 5 years. Conviction rate by the court was better in India than the metropolitan cities of India during the last 5 years. Case acquitted by the court in India was 24, 9, 10, 4 and 10, and in metropolitan cities it was 2, 1, 3, 0 and 2 during year 2017, 2018, 2019, 2020 and 2021, respectively. Conclusion: Vitriolage not only destroys physical health but also destroys mental health. Despite of strict action taken by the Indian government, vitriolage is still prevalent in India. Male dominancy and inadequate legal systems are responsible for this. Though there is a standard set by the Supreme Court for the sale of acid, it remains easily available as the guidelines are frequently violated by the preparator. Case investigation and chargesheeting should increase by the police. Trial of the case and conviction should increase by the court. Vitriolage victims must be sure of their scope to obtain education and job opportunity and societal fiction should be reviewed to support people to acknowledge why vitriolage is committed mainly against females.

Keywords: Acquitted, chargesheeting, convicted, metropolitan, trial, vitriolage

Address for correspondence: Dr. Manisha Verma, Department of Periodontology, 5th Floor, New Dental Building, Faculty of Dental Sciences, King George's Medical University, Lucknow - 226003, Uttar Pradesh, India. E-mail: vcmanisha29nov@gmail.com

Received: 25-03-2023 **Revised:** 21-06-2023 **Accepted:** 04-07-2023 Published: 06-03-2024

Access this article online Quick Response Code:

http://journals.lww.com/JFMPC

10.4103/jfmpc.jfmpc 539 23

Introduction

Women are facing various types of violence around the world. Vitriolage is one such violence faced by women.^[1] Vitriolage or acid attack or acid throwing is a gender-based terrible violent crime. [2-4] It is defined as an act of throwing acid onto the body

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Khan MA, Katiyar R, Verma M, Verma AK. Spectrum of vitriolage in India: A retrospective data record-based study. J Family Med Prim Care 2024;13:556-67.

of a person with the intention of injuring or disfiguring her/him out of jealousy or revenge resulting in burning and dissolution of the victim's skin, connective tissue and even bones.^[5] There are many everlasting sequels of vitriolage which consist of permanent scarring of the face or body, blindness as well as socioeconomic and psychological intricacy. [4] Vitriolage comprises of throwing concentrated mineral acid like sulphuric acid (oil of vitriol, tezaab in Hindi), hydrochloric acid or nitric acid, carbolic acid, corrosive alkalis or vegetable poison like juice of semecarpus on the face or body of a person. [6] Sulphuric acid (oil of vitriol) is most commonly used for acid throwing hence it derives its name vitriolage. [7] Vitriolage are most common in the Asian countries especially in south east Asian region^[8-12] followed by Europe and South America. [13,14] Bangladesh, India, Pakistan, Colombia and Cambodia are the countries having the highest incidence of acid attacks and where it is sex-based violence. [15] There is a sharp rise in vitriolage cases in India in the last few years as indicated by data from the NCRB. Seventy per cent victims of vitriolage are women in India as indicated by annual reports of the Acid Survivor Foundation.[16-18]

Aims and Objective

- 1. The first aim of the present study was to report incidence of acid attacks in India, states of India, in metropolitan cities of India during the last 5 years, that is, from 2017 to 2021.
- 2. To analyse the investigation of cases of vitriolage against women by police in India and metropolitan cities of India each year during the last 5 years.
- 3. To analyse the chargesheeting rate of cases of vitriolage against women in India and in metropolitan cities of India.
- 4. To report the total number of cases of acid attacks against women that went for trial in court and cases pending trial at the end of the year in India and in metropolitan cities of India each year during the last 5 years.
- To report total cases convicted by the court and total cases disposed of by the court each year in India and metropolitan cities of India each year.
- 6. To analyse conviction rate in India and in metropolitan cities.
- 7. Person arrested for acid attacks against women each year.
- 8. Various steps to give justice to the victim of vitriolage.

Materials and Methods

- 1. Present study is retrospective data record-based study.
- 2. Available data for the last 5 years (from 2017 to 2021) were taken from National Crime Report Bureau (NCRB).
- Available as per NCRB data were analysed as per aims and objectives.
- 4. Ethical issues: Before referring to the data from the website, official mail was sent for its use. Since the data is already available in the public domain and at any stage the identity of the victim will not be revealed, the pre-requisite of ethical consideration could be surpassed. The data will be analysed anonymously and unlinked without revealing personal information.

Result

Available data of NCRB was analysed in Microsoft Excel and various statistics are represented from Tables 1 to 32 and Figures 1 to 16.

Discussion

Vitriolage is more prevalent in developing countries like India, Pakistan, Bangladesh, Cambodia, Colombia and Uganda. Globally 80% of vitriolage victims are women. Sixty per cent case of vitriolage is perpetrated by familiar of the victim. Most cases of vitriolage are found in the young age group between 20 years and 35 years. Low socioeconomic status, illiteracy and unemployment are vulnerable risk factors for vitriolage. [19-25]. Rationale behind vitriolage vary in various countries. [26] Vitriolage is more prevalent

Table 1: Showing incidence of acid attacks in India during the last 5 years

S. No.	Year	Incidence of acid attack
1	2017	244
2	2018	228
3	2019	240
4	2020	182
5	2021	176

Table 2: State-wise overall incidence of acid attacks among top 10 states in the year 2017

State	Overall incidence of acid attacks in state in 2017
Uttar Pradesh	56
West Bengal	54
Odisha	13
Kerala	13
Delhi state	11
Andhra	9
Haryana	9
Maharashtra	9
Rajasthan	9
Bihar	8
Gujarat	8

Table 3: State-wise overall incidence of acid attacks in India among top 10 states in the year 2018

State	Overall incidence of acid attacks in the state in 2018
West Bengal	50
Uttar Pradesh	40
Odisha	13
Punjab	12
Bihar	12
Delhi state	11
Telangana	10
Gujarat	9
Madhya Pradesh	9
Kerala	8
Rajasthan	8

Table 4: State-wise overall incidence of acid attacks among the top 10 states in the year 2019

State	Overall incidence of acid attacks in 2019
West Bengal	50
Uttar Pradesh	45
Bihar	15
Madhya Pradesh	12
Punjab	11
Odisha	10
Delhi state	10
Telangana	10
Gujarat	10
Maharashtra	10

Table 5: State-wise overall incidence of acid attack among top 10 states in the year 2020

top to states in the year 2020	
State	Overall incidence of acid attacks in 2020
West Bengal	51
Uttar Pradesh	30
Madhya Pradesh	13
Odisha	11
Kerala	11
Gujarat	8
Andhra Pradesh	7
Maharashtra	7
Haryana	6
Punjab	6
Karnataka	5

Table 6: State-wise overall incidence of acid attacks among top 10 states in the year 2021

among top 10 states in the year 2021	
State	Overall incidence of acid attacks in 2021
West Bengal	34
Uttar Pradesh	22
Rajasthan	15
Maharashtra	12
Gujarat	11
Haryana	11
Kerala	10
Delhi state	9
Assam	8
Madhya Pradesh	7
Tamil Nadu	7

in developing countries like India because of the stronger gender dynamic in Indian society; men perpetrate offences against women. [24,27-29] The various motives are romantic or sexual rejection (most common rationale behind vitriolage on women), [30-35] marriage refusal, suspicion of infidelity, breakup of extramarital affair, enmity of husband with sufferer, jealousy with victim's job, success or beauty, refusal to join the previous work station, enmities with victim or victim's family and dispute of property with victim or victim's family. [9]

Incidence of vitriolage was 244 in 2017 which decreased to 176 in the year 2021 [Table 1 and Figure 1]. This shows a

Table 7: Overall incidence of acid attacks among West Bengal and Uttar Pradesh during the last 5 years

Year	Overall incidence of acid attacks in West Bengal	Overall incidence of acid attacks in Uttar Pradesh
2017	54	56
2018	50	40
2019	50	45
2020	51	30
2021	34	22

Table 8: Incidence of acid attacks against women among top 10 states during 2017

State	Incidence of acid attacks against women in 2017
Uttar Pradesh	41
West Bengal	35
Odisha	11
Kerala	9
Delhi state	8
Madhya Pradesh	5
Punjab	4
Bihar	4
Gujarat	4
Haryana	4

Table 9: Incidence of acid attacks against women among top 10 states during 2018

State	Incidence of acid attacks against women in 2018
West Bengal	36
Uttar Pradesh	32
Telangana	10
Gujarat	7
Bihar	6
Madhya Pradesh	5
Delhi state	5
Maharashtra	5
Odisha	5
Kerala	4
Punjab	4

decreasing trend in the last 5 years and that may be due to good governance and public awareness. As per data of NCRB among states of India, West Bengal reported the highest number of overall vitriolage cases followed by Uttar Pradesh during the last 5 years [Tables 2-7 and Figures 2, 3]. The incidence was decreasing in both the states, and this was again due to good governance and public awareness. West Bengal was the topmost state in India for acid attacks against women in 2018, 2020 and 2021 [Tables 9, 11 and 12], and Uttar Pradesh was on top in 2017 and 2019 [Tables 8, 10, 13 and Figures 4, 5]. As per data from NCRB, Delhi city was the topmost metropolitan city for overall acid attack, though Delhi city was at 2nd place in year 2021 [Tables 14-18 and Figures 6, 7] and for acid attack against women, Delhi city was topmost city during last 5 years [Tables 20-25 and Figures 8-10].

Table 10: Incidence of acid attacks against women among top 10 states during 2019

	top 10 states during 2019
State	Incidence of acid attacks against women in 2019
Uttar Pradesh	42
West Bengal	36
Delhi Union	8
Territory	
Madhya Pradesh	8
Bihar	7
Maharashtra	6
Assam	6
Haryana	4
Punjab	5
Gujarat	5
Tamil Nadu	4

Table 11: Incidence of acid attacks against women among top 10 states during 2020

top 10 states during 2020	
State	Incidence of acid attacks against women in 2020
West Bengal	29
Uttar Pradesh	21
Odisha	6
Madhya Pradesh	5
Karnataka	5
Andhra	4
Maharashtra	4
Assam	4
Kerala	4
Gujarat	4

Table 12: Incidence of acid attacks against women among top 10 states during 2021

State	Incidence of acid attacks against women in 2021
West Bengal	30
Uttar Pradesh	18
Delhi state	8
Assam	7
Gujarat	6
Haryana	6
Madhya Pradesh	5
Odisha	3
Punjab	3
Rajasthan	3
Maharashtra	3

Table 13: Incidence of acid attacks against women in West Bengal and Uttar Pradesh during the last 5 years

Year	Acid attack against women in West Bengal during the last 5 years	Acid attacks against women in Uttar Pradesh during the last 5 years
2017	35	41
2018	36	32
2019	36	42
2020	29	21
2021	30	18

Table 14: Overall incidence of acid attacks among top 5 metropolitan cities during 2019

Metropolitan city	Overall incidence of acid attacks in 2017
Delhi city	11
Lucknow	5
Mumbai	3
Jaipur	2
Bengaluru	2
Ghaziabad	2

Table 15: Overall incidence of acid attack among top 5 metropolitan city during 2018

Metropolitan city	Overall incidence of acid attack in 2018
Delhi city	11
Ahmedabad	6
Chennai	4
Hyderabad	3
Bengaluru	2
Ghaziabad	2
Lucknow	2

Table 16: Overall incidence of acid attacks among top 5 metropolitan cities during 2019

Metropolitan city	Overall incidence of acid attacks in 2019
Delhi city	9
Bengaluru	4
Chennai	3
Ahmedabad	2
Indore	2
Surat	2
Mumbai	2

Table 17: Overall incidence of acid attacks among top 5 metropolitan cities during 2020

Metropolitan city	Overall incidence of acid attacks in 2020
Surat	3
Delhi city	2
Pune	1
Kolkata	1
Bengaluru	1

Although efforts and measures has been taken by the government to address the vitriolage, the implementation of these steps seem to incapable of fighting the acid attack. According to acid Survivors Trust, international research shows it takes 5 to 10 years to finish a case of vitriolage in India, and the offender was known to the victim in 60 to 70 per cent of vitriolage. Despite strict laws, acids are still easily available in the country without any restriction which makes perpetrator do such violent crimes without any fear of law. [36] The parliament has not approved the law specifically dealing with chain distribution systems for acid or the exact duties of manufacturing companies. [37].

Table 18: Overall incidence of acid attacks among top 5 metropolitan cities during 2021

	-
Metropolitan city	Overall incidence of acid attacks in 2021
Delhi city	9
Surat	3
Kolkata	2
Jaipur	2
Ghaziabad	1
Chennai	1
Kanpur	1
Lucknow	1

Table 19: Overall incidence of acid attacks during the last 5 years in Delhi city

Year	Incidence of acid attacks in Delhi city
2017	11
2018	11
2019	9
2020	2
2021	9

Table 20: Incidence of acid attacks against women among top 5 metropolitan cities during 2017

top o more positive and a second	
Incidence of acid attacks against women in 2017	
5	
2	
1	
1	
1	
1	
1	
1	

Table 21: Incidence of acid attack against women among top 5 metropolitan cities during 2018

Metropolitan city	Incidence of acid attacks against women in 2018
Delhi city	5
Ahmedabad	5
Hyderabad	3
Ghaziabad	2
Indore	2
Bengaluru	1
Chennai	1
Kolkata	1
Kanpur	1

The number of acid attack cases (previous year + this year) in India that went for police investigation was 203 in 2017, 188 in 2018, 211 in 2019, 163 in 2020 and 161 in 2021 [Table 26 and Figure 11], whereas the incidence of acid attack was 244 in 2017, 228 in 2018, 240 in 2019, 182 in 2020 and 176 in 2021 [Table 1]. This statistics reveals investigation of acid attack cases was less than the incidence in a particular year in India. During the last 5 years, many cases were ended by police as the final report was false or a mistake

Table 22: Incidence of acid attacks against women among top 5 metropolitan cities during 2019

Metropolitan city	Incidence of acid attacks against women in 2019
Delhi city	7
Bengaluru	4
Chennai	2
Indore	2
Mumbai	2
Surat	2
Lucknow	1
Kolkata	1
Jaipur	1
Ahmedabad	1

Table 23: Incidence of acid attacks against women among top 5 metropolitan cities during 2020

Metropolitan city	Incidence of acid attacks against women in 2020
Delhi city	2
Surat	2
Bengaluru	1
Kolkata	1
Pune	1

Table 24: Incidence of acid attacks against women among top 5 metropolitan cities during 2021

Metropolitan city	Incidence of acid attacks against women in 2021
Delhi city	8
Jaipur	2
Kolkata	2
Chennai	1
Ghaziabad	1
Kanpur	1
Mumbai	1

Table 25: Incidence of acid attacks against women in Delhi city during the last 5 years

Year	Incidence of acid attacks against women in Delhi city during the last 5 years
2017	5
2018	5
2019	7
2020	2
2021	8

of fact/of law or civil dispute or insufficient evidence/untraced/no clue. Out of 203 investigated cases by police, only 146 cases were disposed of by police in 2017; out of 188 investigated cases by police, only 121 cases were disposed of in 2018; out of 211 investigated cases by police, only 146 cases were disposed of in 2019, out of 163 investigated cases by police, only 106 cases were disposed of in 2020; and out of 161 investigated cases by police, only 109 cases were disposed of by police in 2021. Between 2017 and 2021, number of cases disposed of by police dropped from 146 to 109 [Table 26 and Figure 11].

Table 26: Police disposal of crime (acid attacks) against women during the last 5 years in India

women during the last 5 years in mala								
Police disposal of acid attacks against women	2017	2018	2019	2020	2021			
Total case for investigation=	203	188	211	163	161			
previous year+this year								
Case ended as final report was false	6	5	5	6	4			
Case ended as mistake of fact or of	4	2	2	1	2			
law or civil dispute								
Case true but insufficient evidence	4	10	15	7	6			
or untraced or no clue								
Case chargesheeted (previous	130	100	121	91	97			
year+this year)								
Total case disposed of by police	146	121	146	106	109			
Case pending investigating at the	57	66	64	57	52			
end of this year								
Chargesheeting rate	89	82.6	82.9	85.8	89			
Pendency percentage	28.1	35.1	30.3	35	32.3			

Table 27: Showing overall acid attacks against women in metropolitan cities of India during the last 5 years

Year	Overall acid attacks in metropolitan city	Acid attacks against women in metropolitan city
2017	32	14
2018	33	21
2019	28	22
2020	8	7
2021	21	16

Table 28: Police disposal of crime (acid attacks) against women during the last 5 years in metropolitan cities

Police disposal of acid attacks against women in metropolitan city	2017	2018	2019	2020	2021
Total case for investigation	29	37	40	25	29
Case ended as final report was false	0	0	0	1	0
Case ended as mistake of fact or law or	0	0	0	0	1
civil dispute					
Case true but insufficient evidence	0	1	2	2	0
Case chargesheeted	25	18	20	9	15
Total case disposed of by police	13	19	22	12	16
Case pending investigation at end of year	16	18	18	13	13
Chargesheeting rate	100	94.7	90.9	75	93.8
Pending percentage	55.2	48.6	45	52	44.8

The number of acid attack cases against women (previous year + this year) in the metropolitan cities that went for police investigation was 29 in 2017, 37 in 2018, 40 in 2019, 25 in 2020 and 29 in 2021 [Table 28 and Figure 12], whereas incidence of acid attacks against women in metropolitan cities were 14, 21, 22, 7 and 16 in 2017, 2018, 2019, 2020 and 2021, respectively [Table 27]. This statistics reveals police investigation of acid attack cases in metropolitan cities was more than incidence in a particular year, and this was because total investigation in a particular year includes pending cases from the previous year. Out of 29 cases only 13 were disposed of by police in 2017, out of 37 cases only 19 were disposed of by police in 2018; out

Table 29: Court disposal of acid attacks against women in India during the last 5 years

_					
Court disposal of acid attacks	2017	2018	2019	2020	2021
against women					
Total case for trial=	359	417	418	519	600
previous year+this year					
Total case convicted (previous	14	17	13	10	3
year+this year)					
Case discharged	2	0	1	0	1
Case acquitted	24	9	10	4	11
Case in which trial was completed	40	22	24	14	15
Total case disposed of by court	41	27	24	16	15
Case pending trial at	318	390	394	503	585
the end of this year					
Conviction rate	35	65.4	54.2	71.4	20
Pendency percentage	88.6	93.5	94.3	96.9	97.5

Table 30: Court disposal of acid attacks against women in metropolitan cities during the last 5 years

Court disposal of crime (acid attacks) against women in metropolitan city	2017	2018	2019	2020	2021
Total case for trial (previous+this year)	43	57	74	81	94
Total case convicted (previous year+this year)	1	1	2	0	0
Total case acquitted	2	1	3	0	2
Case in which trial was completed	3	2	5	0	2
Case disposed of by court	3	2	5	1	2
Case pending trial at end of year	40	55	69	80	92
Conviction rate	33.3	50	40	-	0
Pending percentage	93	96.5	93.2	98.8	97.9

Table 31: Disposal of person arrested for acid attacks against women in India during the last 5 years

Disposal of person arrested for		2018	2019	2020	2021
acid attacks against woman					
Person arrested (male+female)	167	161	210	149	167
Person chargesheeted (male+female)	149	149	189	135	164
Person convicted (male+female)	20	28	19	18	7
Person discharged (male+female)	3	0	2	0	3
Person acquitted (male+female)	30	13	15	14	22

of 40 cases only 22 were disposed of the police in 2019; out of 25 cases only 12 were disposed of by police in 2020; and out of 29 cases only 16 cases were disposed of by police in 2021. This statistics reveals slow action by the police in metropolitan cities.

The number of acid attack cases against women in India that went to trial (previous + this year) was 359 in 2017, 417 in 2018, 418 in 2019, 519 in 2020 and 600 in 2021 [Table 29 and Figure 13], whereas, incidence of acid attack was 244 in 2017, 228 in 2018, 240 in 2019, 182 in 2020 and 176 in 2021 [Table 1 and Figure 1]. It shows that number of trial cases appear high compared to incident cases in the corresponding year. This also demonstrate that the number of cases that went for trial in a particular year also included incidence of acid attacks from previous years. Out of 359 cases that went to trial, only 14 cases (3.8%) were convicted, 24 (6.6%) were acquitted, in

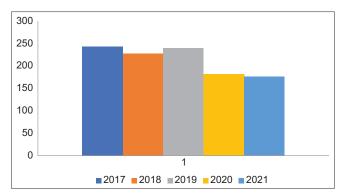


Figure 1: Showing incidence of acid attacks in India during the last 5 years

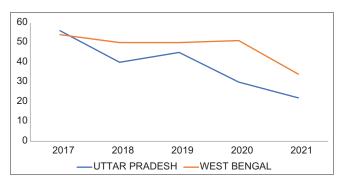


Figure 3: Overall incidence of acid attacks in West Bengal and Uttar Pradesh during the last 5 years

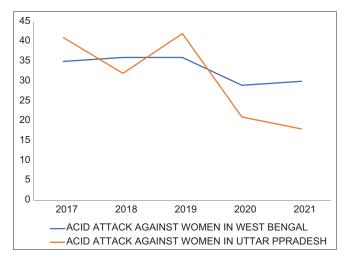


Figure 5: Incidence of acid attacks against women in West Bengal and Uttar Pradesh during the last 5 years

Table 32: Disposal of person arrested for acid attacks against women in metropolitan cities									
Disposal of person arrested for acid attacks against women in metropolitan city	2017	2018	2019	2020	2021				
Person arrested (male+female)	19	40	30	12	28				
Person chargesheeted (male+female)	14	39	25	12	22				
Person convicted (male+female)	1	1	3	0	0				
Person discharged (male+female)	0	0	0	0	0				
Person acquitted (male+female)	2	1	6	0	2				

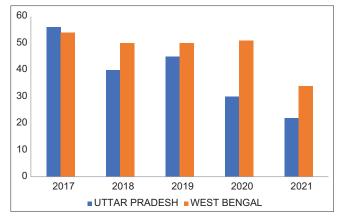


Figure 2: Overall incidence of acid attacks in West Bengal and Uttar Pradesh during the last 5 years

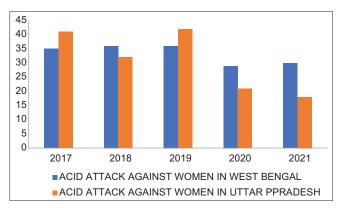


Figure 4: Incidence of acid attacks against women in West Bengal and Uttar Pradesh during the last 5 years

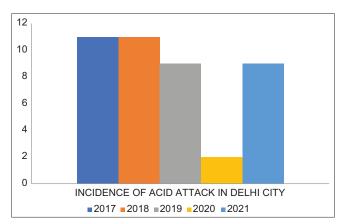


Figure 6: Showing overall incidence of acid attacks in Delhi city during the last 5 years

40 (11.1%) trial was completed and 41 (11.2%) were disposed of by the court in 2017; out of 417 cases that went for trial only 17 (4%) were convicted, 9 (2.1%) were acquitted, trial was completed in 22 (5.2%) and 27 (6.4%) were disposed of by the court in 2018; out of 418 cases that went for trial only 13 (3.1%) were convicted, 10 (2.3%) were acquitted, in 24 (5.7%) trial was completed and 24 (5.7%) were disposed of by the court in 2019; out of 519 cases that went for trial only 10 case (1.9%) were convicted, 4 (0.7%) were acquitted, in 14 (2.6%) trial was

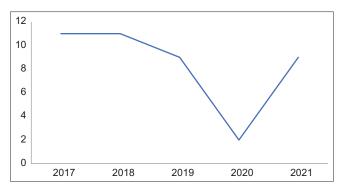


Figure 7: Showing overall incidence of acid attacks in Delhi city during the last 5 years

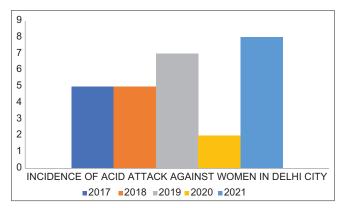


Figure 9: Incidence of acid attacks against women in Delhi city during the last 5 years

completed and 16 (3.0%) were disposed of by the court in 2020; and out of 600 cases that went for trial only 3 (0.5%) were convicted, 11 (1.8%) were acquitted, in 15 (2.5%) trial was completed and 15 (2.5%) were disposed of by the court in 2021. So, from this study it is clear that convicted case and acquitted case was slow in India during the last 5 years. Even more than 90 per cent of case of acid attacks in a year don't reach for trial in the same year in India. A similar finding was revealed by Poorvi Gupta. [38]

The number of acid attack cases against women in metropolitan cities went to trial (previous + this year) was 43 in 2017, 57 in 2018, 74 in 2019, 81 in 2020 and 94 in 2021 [Table 30 and Figure 14], whereas incidence of acid attack in metropolitan cities against women were 14, 21, 22, 7 and 16 in 2017, 2018, 2019, 2020 and 2021, respectively. It showed that number of trial cases appeared high compared to incident cases in the corresponding year. This also demonstrates that the number of cases that went for trial in a particular year also included incidence of acid attacks against women in metropolitan cities from the previous year. Out of 43 cases that went for trial only 1 (2.3%) was convicted, 2 (4.6%) were acquitted, in 3 (6.9%) trial was completed and 3 (6.9%) were disposed of by the court in 2017; out of 57 cases that went for trial only 1 (1.7%) was convicted, 1 (1.7%) was acquitted, in 2 (3.5%) trial was completed and 2 (3.5%) cases were disposed of by the court in 2018; out of 74 cases that went for trial only 2 (2.7%) were convicted, 3 (4.0%) acquitted, trial

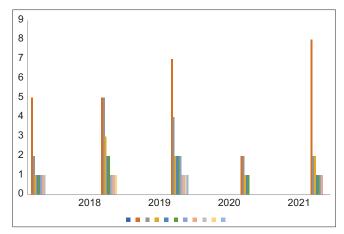


Figure 8: Incidence of acid attacks against women in top 5 metropolitan cities during the last 5 years

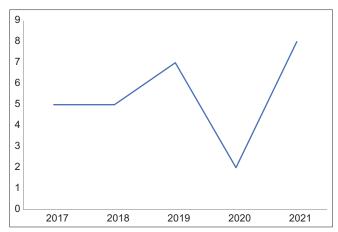


Figure 10: Incidence of acid attacks against women in Delhi city during the last 5 years

was completed in 5 (6.7%) and 5 (6.7%) were disposed of by the court in 2019; out of 81 cases that went for trial, nobody convicted or acquitted or went for trial and only 1 (1.2%) was disposed of by the court in 2020 and out of 94 cases that went for trial, nobody convicted, 2 (2.1%) were acquitted, trial was completed in 2 (2.1%) cases and 2 (2.1%) were disposed of by the court in 2021. So, from this study it is clear that convicted cases and acquitted cases were low in metropolitan cities of India. Even more than 90 per cent of cases of acid attacks in a year don't reach for trial the same year in metropolitan cities in India. So, our study reveals that conditions are more compromising in metropolitan cities for acid attack trials and cases disposing by the court.

Among 244 incidence of acid attacks in India, 167 (68.4%) persons (male + female) were arrested, and out of this 149 were chargesheeted (89%), 20 convicted (11.9%), 3 discharged (1.7%) and 30 person were acquitted (17.9%) in 2017; among 228 incidence acid attacks, 161 (70.6%) person (male + female) arrested and out of this 149 were chargesheeted (92.5%), 28 convicted (17.3%), nobody discharged and 13 person acquitted (8.0%) in 2018; among 240 incidence of acid attacks, 210 (87.5%)

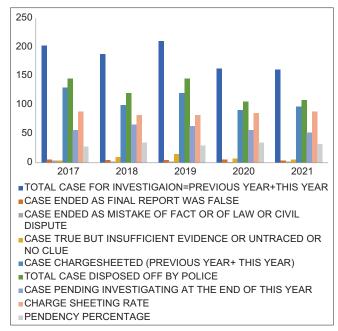


Figure 11: Police disposal of crime (acid attacks) against women in India during the last 5 years

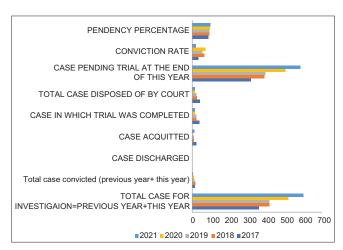


Figure 13: Court disposal of acid attacks against women in India during the last 5 years

persons (male + female) were arrested and out of this 189 were chargesheeted (90%), 19 convicted (9%), 2 discharged (0.9%) and 15 acquitted (7.14%) in 2019, among 182 incidence of acid attacks, 149 (81.8%) persons (male + female) arrested and out of this 135 were chargesheeted (90.6%), 18 convicted (12.0%), nobody discharged and 14 person acquitted (9.3%) in 2020; and among 176 incidence of acid attacks, 167 (94.8%) persons (male + female) were arrested and out of this 164 were chargesheeted (98.2%), 7 convicted (4.1%), 3 discharged (1.7%) and 22 acquitted (13.1%) in 2021 [Table 31 and Figure 15]. So, our study reveals that the number of persons arrested for acid attacks is quite low than incidence of acid attacks in the last 5 years, though the percentage of arrest is on an increasing trend and was 68.4% in 2017 and became 94.8% in 2021. This indicates good governance and improving the judicial system in India.

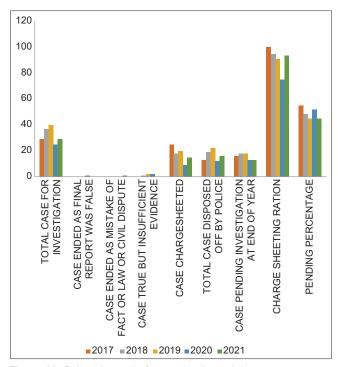


Figure 12: Police disposal of crime (acid attacks) against women in metropolitan cities during the last 5 years

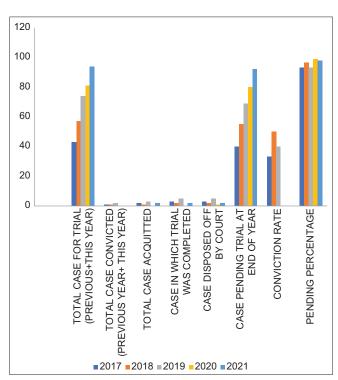


Figure 14: Court disposal of acid attacks against women in metropolitan cities during the last 5 years

Among incidence of 32 acid attacks in metropolitan cities, 19 (59.3%) persons (male + female) were arrested, 14 were chargesheeted (73.6%), 1 was convicted (5.2%), none was discharged and 2 were acquitted (10.2%) in 2017; among incidence of 33 acid attacks, 40 (121%) persons (male + female)

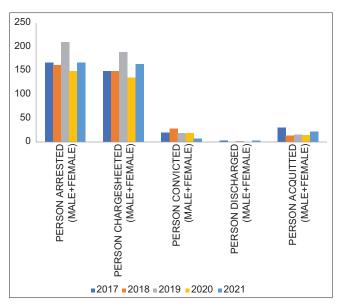


Figure 15: Disposal of person arrested for acid attacks against women in India during the last 5 years

were arrested, 39 were chargesheeted (97.5%), 1 was convicted (2.5%), no person discharged and 1 was acquitted (2.5%) in 2018. In the year 2018, arrest of the persons was more than incidence of acid attacks in metropolitan cities and it was because arrest also included previous year's pending arrests. In the year 2019, among incidence of 28 acid attacks, 30 (107%) persons (male + female) were arrested for acid attacks in metropolitan cities, 25 were chargesheeted (83.3%), 3 were convicted (10%), no one was discharged and 6 were acquitted (20%). In the year 2019, arrests of the person was more than incidence of acid attacks in metropolitan cities and it was because arrest also included previous year's pending arrest. Among incidence of 8 acid attacks, 12 (150%) persons (male + female) were arrested, 12 were chargesheeted (100%), nobody was convicted, nobody was discharged and nobody was acquitted in 2020 [Table 32 and Figure 16]. In the year 2020, arrests of the persons were more than incidence of acid attacks in metropolitan cities and it was because arrest also included previous year's pending arrest. In incidence of 21 acid attacks, 28 (133%) persons (male + female) were arrested, 22 were chargesheeted (78.5%), nobody was convicted, nobody was discharged and 2 persons were acquitted (7.1%) in 2021. Again, in the year 2021 like years 2018, 2019 and 2020, arrests of the persons were more than incidence of acid attacks in metropolitan cities and it was because arrest also included previous year's pending arrest. Present study reveals that the judicial system working good and better implementation of law in metropolitan cities than overall India.

Although effort and measure have been taken by the government to address the vitriolage, the implementation of these steps seems to be incapable of fighting the acid attack. According to Acid Survivors Trust, international research shows it takes 5 to 10 years to finish a case of vitriolage in India and the offender was known to the victim in 60 to 70 per cent of vitriolage. Despite strict law, acids are still easily

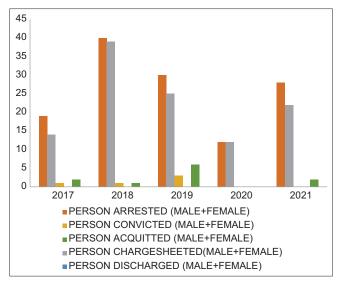


Figure 16: Disposal of person arrested for acid attacks against women in metropolitan cities

available in the country without any restriction which makes perpetrator do such violent crimes without any fear of law. [36] The parliament has not approved the law specifically dealing with chain distribution systems for acid or the exact duties of manufacturing companies. [37]

Conclusion

Women suffer manifold violence, and an acid attack is one of them. It not only destroys physical health but also destroys mental health. Despite strict action taken by the Indian government, vitriolage is still prevalent in India. Male dominancy and inadequate legal system are responsible for the growing of such incidence. Though there is a standard set by the Supreme Court for the sale of acid, it remains easily available as the guideline are frequently violated by the preparator. Many amendments related to vitriolage have been made in the Indian penal code but still is needed for controlling such terrible crime. Although there are guidelines for compensation, many victims of vitriolage didn't get compensation on time. So, there is a need for not only improving guidelines for compensation but also strictly implementing them so that each victim of acid attack can get compensation on time. Following steps should be implemented to ameliorate justice for the victims of vitriolage:

- There should be an increased investigation of vitriolage completed on time by police. If investigation and case disposal are on time, it will shorten the time spent by courts for final resolvent of the case.
- Case should not be ended by the police due to any political pressure or due to lure of money.
- Since chargesheeting by police is quite low in comparison to incidence of vitriolage, which play a major role in delaying justice to the victim of vitriolage. Hence case chargesheeting should be increased by the police.
- 4. More number of trials should be completed by the court each year.

- Conviction rate in India should improve each year. There should be incorporation of section 114 B to the Indian evidence act with amendments to facilitate increasing conviction rate.
- Young people must be educated about non-violence, women's equality and women's right.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

- Critelli FM. Beyond the Veil in Pakistan. Affilia J Women Soc Work 2010;25:236-49. 10.1177 / 0886109910375204.
- 2. Shapiro B. Large intensity fluctuations for wave propagation in random media. Phys Rev Lett 1986;57:2168-71.
- Adeleke NA, Adebimpe WO, Farinloye E, Olowookere S. Rural and urban prevalence of sexual assault against women in an African population. Bangladesh J Med Sci 2019;18:628-35.
- 4. Mittal P, Dhattarwal SK. Vitriolage: The curse of human origin. Medical Science 2014;6:61-4.
- 5. Vij K. Textbook of forensic medicine and toxicology: principles and practice, 5/e. Elsevier India; 2011.
- Mukherjee JB. Toxicology: Vitriolage. Forensic Medicine and Toxicology. 4th ed. Academic Publishers, Kolkata. 2011:805-6.
- Reddy DK. The essentials of forensic medicine and toxicology. 2019.
- Kanchan T, Ram P, Tandon A, Krishan K. Acid violence in India--A modern day somber reality? Burns 2015;41:1372-3.
- Kumar V. Acid Attacks in India: A socio-legal report. Dignity: A Journal on Sexual Exploitation and Violence 2021;6:e5.
- Waldron NR, Kennifer D, Bourgois E, Vanna K, Noor S, Gollogly J. Acid violence in Cambodia: The human, medical and surgical implications. Burns 2014;40:1799-804.
- 11. Mannan A, Ghani S, Clarke A, White P, Salmanta S, Butler PE. Psychosocial outcomes derived from an acid burned population in Bangladesh, and comparison with Western norms. Burns 2006;32:235-41.
- 12. Bhullar DS. Acid throwing: A cause of concern. J Punjab Acad Forensic Med Toxicol 2013;13:60-2.
- 13. Peck MD. Epidemiology of burns throughout the world. Part I: Distribution and risk factors. Burns 2011;37:1087-100.
- 14. Peck MD. Epidemiology of burns throughout the World. Part II: Intentional burns in adults. Burns 2012;38:630-7.
- 15. Twoon M, Tan A, Dziewulski P. Acid attacks: A growing problem in the UK. Burns 2016;42:1156-7.
- 16. Islam T, Islam MR, Ah SH. 18. Data collection on acid attack survivor women: a PhD researcher's experience from Bangladesh. Field Guide for Research in Community Settings: Tools, Methods, Challenges and Strategies. 2021;211.
- 17. Atiyeh BS, Costagliola M, Hayek SN. Burn prevention mechanisms and outcomes: Pitfalls, failures and successes. Burns 2009;35:181-93. doi: 10.1016/j.burns.2008.06.002. PMID: 18926639.

- National Crime Records Bureau. (2012-2021). Crime In India. Ministry of Home Affairs (India). https://ncrb.gov.in/en/crime-india
- 19. Mittal S, Singh T, Verma SK. The influence of social support in the rehabilitation of acid attack victims: A qualitative inquiry. J Community Appl Soc Psychol 2021;31:228-40.
- 20. Mittal S, Singh T, Verma SK. Role of psychological makeup in psychological rehabilitation of acid attack victims. J Interpers Violence 2021;36:NP13606-22.
- 21. Murphy L, Read D, Brennan M, Ward L, McDermott K. Burn injury as a result of interpersonal violence in the Northern Territory Top End. Burns 2019;45:1199-204.
- 22. Jabeen S, Riaz M, Omer S. Applying socioecological framework to acid attack violence: An exploration of inhabitant factors. J Interpers Violence 2021;36:NP12481-503.
- 23. Restrepo-Bernal D, Gómez-González A, Gaviria SL. Deliberate burning with acid. New expressions of violence against women in Medellín, Colombia. Series of cases. Verte×2014;25:179-85.
- 24. Sabzi Khoshnami M, Mohammadi E, Addelyan Rasi H, Khankeh HR, Arshi M. Conceptual model of acid attacks based on survivor's experiences: Lessons from a qualitative exploration. Burns 2017;43:608-18.
- 25. Guerrero L. Burns due to acid assaults in Bogotá, Colombia. Burns 2013;39:1018-23.
- Dissanaike S, Rahimi M. Epidemiology of burn injuries: Highlighting cultural and socio-demographic aspects. Int Rev Psychiatry 2009;21:505-11.
- 27. Ahmad N. Acid attacks on women: An appraisal of the Indian legal response. Asia-Pac J Hum Rights Law 2011;12:55-72.
- 28. Singh SS. West Bengal tops in 2018 acid attack cases: NCRB. The Hindu 2020. https://www.thehindu.com/news/national/other-states/west-bengal-tops-in-2018-acid-attack-casesncrb/article30537254.ece#:~:text=The%20 NCRB%20report%20shows%20that,acid%20attacks%20in%20 the%20country. and text=In%202017%20the%20three%20 States,or%2050%20%25%20of%20all%20attacks.
- 29. Tiwary D. (2014, Jan 12). Acid attacks highest in patriarchal societies, Delhi among worst states. The Times of India. https://timesofindia.indiatimes.com/india/Acid-attacks-highest-in-patriarchal-societies-Delhi-among-worst-states/articleshow/28692801.cms.
- 30. Yeong EK, Chen MT, Mann R, Lin TW, Engrav LH. Facial mutilation after an assault with chemicals: 15 cases and literature review. J Burn Care Rehabil 1997;18:234-7.
- 31. Begum AA. Acid violence: A burning issue of Bangladesh-Its medicolegal aspects. Am J Forensic Med Pathol 2004;25:321-3.
- 32. Faga A, Scevola D, Mezzetti MG, Scevola S. Sulphuric acid burned women in Bangladesh: A social and medical problem. Burns 2000;26:701-9.
- 33. Mannan A, Ghani S, Sen SL, Clarke A, Butler PEM. The problem of acid violence in Bangladesh. J Surg 2004;2:39-43.
- 34. Karunadasa KP, Perera C, Kanagaratnum V, Wijerathne UP, Samarasingha I, Kannangara CK. Burns due to acid assaults in Sri Lanka. J Burn Care Res 2010;31:781-5.
- 35. Young RC, Ho WS, Ying SY, Burd A. Chemical assaults in Hong Kong: A 10-year review. Burns 2002;28:651-3.
- 36. Bisht B. (2018, November 2018). https://www.shethepeople.tv/news/acid-attacks-in-india-and-how-were-failing-to-tackle-them/.

- 37. Kalantry S, Kestenbaum JG. Acid attacks in India: The case for state and corporate accountability for gender-based crimes. Human Rights in India (Forthcoming), Cornell Legal
- Studies Research Paper 2019. p. 19-27.
- 38. Gupta P. India is failing acid attack survivors, here is the data. shethepeople.

Volume 13: Issue 2: February 2024