International Journal Dental and Medical Sciences Research
Volume 3, Issue 2, Mar-Apr. 2021 pp 909-914 www.ijdmsrjournal.com ISSN: 2582-6018

A Study of Incidence, Severity and Pattern of Domestic Injuries during the Covid- 19 Pandemic

Dr U Sandeep , Dr Rajakeerthana D, Dr Santhini Gopalakrishnan S
Mch Plastic Surgery Chettinad Super Speciality hospital, Kancheepuram
Postgraduate Student MS General Surgery, Chettinad hospital and Research institue
MD Biochemistry, Associate professor , CHRI

Submitted: 01-04-2021 Revised: 08-04-2021 Accepted: 10-04-2021

ABSTRACT:Domestic injuries are accidental injuries that happen in the household and surroundings;
Our study was carried out to analyse the incidence and severity of these household injuries before and after the COVID-19 pandemic lockdown in the Department of Plastic surgery in a tertiary care center;
We collected data from the Emergency department (Casualty) database for a period of 18 months – 9 months before and after the Covid 19 lockdown; Pre- covid lockdown- August 2019 to March 23rd 2020; Post Covid-19 lockdown- March 24th 2020 to November 2020;
We included all injuries related to trauma, burns and animal bites.
We analysed them and arrived at the incidence of the household injuries and their severity and method of management, the pattern of injuries and age distribution;
We excluded trauma cases which were referred to other departments as a result of more serious injuries like long bone fractures and head injuries;
We have also excluded self-inflicted injuries with suicidal intentions;
Our results show a 21.3% increased incidence of household injuries during the Lockdown;
We have also observed a 10% increase of severe injuries requiring management in the Operation theatre before the lockdown- attributed to high velocity motor vehicle injuries which were common before lockdown;
Though household injuries have increased incidence, the overall severity is less;
The goal of our study is to emphasize on making our Domestic environment as safe as possible;
KEYWORDS: Lockdown, Corona Virus, Domestic injuries, Pandemic

I. INTRODUCTION:

The Indian government implemented nationwide lockdown on 24th March 2020 limiting movement of 1.3 billion population to prevent the spread of novel corona virus;
This lockdown had averted deaths due to covid 19, but has its impacts on the incidence of frequency and severity of domestic injuries
The study demonstrates one such effect of this long term home isolation

II. AIM:

To estimate the incidence of domestic injuries in the covid 19 Pandemic era

III. OBJECTIVE:

- The aim of this study is to show the significant difference in the incidence of frequency and severity of injuries in patients attending Plastic surgery department;
- To identify the factors responsible for its incidence
- To create awareness about prevention of such injuries

VI. METHOD OF STUDY

-Data was collected from hospital registries, patient's files;
-Comparison was done between cases of domestic injuries in the pandemic era and similar duration before the pandemic;

VII. MATERIALS AND METHODS

Study type – Retrospective
Study design – Observational
Study setting – Chettinad Super Speciality hospital- Department of Plastic surgery
Sampling technique- non probability convenient sampling
Duration of study- 18 months from August 2019 to November 2020

International Journal Dental and Medical Sciences Research
Volume 3, Issue 2, Mar-Apr. 2021 pp 909-914 www.ijdmsrjournal.com ISSN: 2582-6018

INCLUSION CRITERIA :
All domestic injuries related to trauma , burns, animal bites

EXCLUSION CRITERIA :
- Electric shocks
- Ingestion of foreign bodies/ poisonings
- Other than animal bites- Snake/Scorpion bites
- Self inflicted injuries with suicidal intention
- Severe life threatening head injuries/ long bone fractures which get referred to other departments

TOOLS USED FOR ASSESMENT :
- DATA ENTRY - data collected was recorded using Microsoft excel spread sheet

VIII. STATISTICAL ANALYSIS :
- Collected data was analysed using Statistical Package for Social Sciences (IBM-SPSS)
- Quantitative variables were described in terms of mean and standard deviation.
- The quantitative variables were described in proportions
- Normality of data assessed before applying appropriate test of significance
- Significance of difference in proportions (qualitative variables) calculated using chi square test
- Significance of p value was taken as $p<0.05$

Incidence

Pre covid

domestic					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	45	47.9	47.9	47.9
	no	49	52.1	52.1	100.0
	Total	94	100.0	100.0	

Post covid

domestic					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	90	69.2	69.2	69.2
	no	40	30.8	30.8	100.0
	Total	130	100.0	100.0	

over all incidence

domestic					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	135	60.3	60.3	60.3
	no	89	39.7	39.7	100.0
	Total	224	100.0	100.0	

International Journal Dental and Medical Sciences Research
Volume 3, Issue 2, Mar-Apr. 2021 pp 909-914 www.ijdmsrjournal.com ISSN: 2582-6018

Precovid / post covid vs no of prcedures needing ot Rx

pre_vs_postcovid * ot procedure done Crosstabulation					
			ot procedure done		Total
			yes	no	
pre_vs_postcovid	post covid	Count	23	107	130
		% within pre_vs_postcovid	17.7%	82.3%	100.0%
	pre covid	Count	26	68	94
		% within pre_vs_postcovid	27.7%	72.3%	100.0%
Total		Count	49	175	224
		% within pre_vs_postcovid	21.9%	78.1%	100.0%

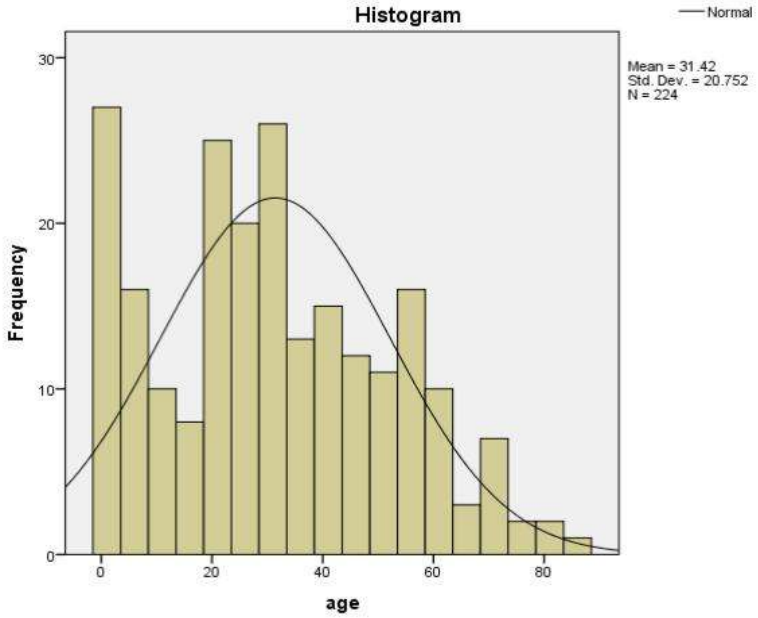
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.171[a]	1	.075		
Continuity Correction[b]	2.615	1	.106		
Likelihood Ratio	3.138	1	.076		
Fisher's Exact Test				.101	.053
Linear-by-Linear Association	3.157	1	.076		
N of Valid Cases	224				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.56.					
b. Computed only for a 2x2 table					

Risk Estimate			
	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for pre_vs_postcovid (post covid / pre covid)	.562	.297	1.064
For cohort ot procedure done = yes	.640	.390	1.049
For cohort ot procedure done = no	1.138	.981	1.320
N of Valid Cases	224		

International Journal Dental and Medical Sciences Research
Volume 3, Issue 2, Mar-Apr. 2021 pp 909-914 www.ijdmsrjournal.com ISSN: 2582-6018

Age distribution of the study participants

Descriptives				
			Statistic	Std. Error
age	Mean		31.42	1.387
	95% Confidence Interval for Mean	Lower Bound	28.69	
		Upper Bound	34.15	
	5% Trimmed Mean		30.70	
	Median		30.00	
	Variance		430.666	
	Std. Deviation		20.752	
	Minimum		1	
	Maximum		88	
	Range		87	
	Interquartile Range		30	
	Skewness		.311	.163
	Kurtosis		-.700	.324



International Journal Dental and Medical Sciences Research
Volume 3, Issue 2, Mar-Apr. 2021 pp 909-914 www.ijdmsrjournal.com ISSN: 2582-6018

Gender distribution of the study participants

gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	140	62.5	62.5	62.5
	female	84	37.5	37.5	100.0
	Total	224	100.0	100.0	

Images of patients who presented with domestic injuries during the Lockdown

IX. RESULTS

Analysing our data, the incidence of domestic injuries before the Lockdown was 47.9% ; Post the Lockdown the incidence was 69.2 %; There was a 21.3 % increase in the incidence of domestic injuries;

Overall the incidence of domestic injuries was 60.3% in the Pre and Post Lockdown era;

Coming to the Severity, 17.7% of the injured patients during the lockdown required management in the Operating theater, whereas the rest of the

patients were managed in the Emergency department;

But 27.7% patients before lockdown required management in the Operating room, which is 10% higher than the lockdown era; (P-Value- 0.07)

This can be attributed to the motor vehicle accidents which had an higher incidence in the Pre-Lockdown period; The high impact injuries had caused severe injuries requiring extensive management;

From the histogram, we can conclude that middle aged people between 20-40 years have the highest incidence of domestic and non domestic injuries owing to the work from home pattern during lockdown;

Also, Males are affected higher than women- 62.5% compared to 37.5%.

In our study, we also noted a significant increase of trauma cases to our Plastic surgery department during the Lockdown- which may be due to non functioning Primary level private clinics;

X. CONCLUSION

Household injuries take a rise during the Lockdown. The reason is due to the increased amount of time spent at home and increased participation in day to day activity. They cause significant morbidity to patients and distress to the family members;

It is important to recognize the pattern of Injuries and avoid them creating a safe domestic environment;

We have observed the common pattern of domestic injuries as door/window hinge crush injuries, Mixer-grinder injuries causing multiple finger crush injuries- all of which required management in the operation theater, kids had splash of hot liquids and lacerations from metal gates , domestic violence, elderly people had falls wet floors;

In view of second wave of the COVID-19 people are still being insisted to stay at home, hence we should be aware that there are still severe injuries occurring at home, and also recognise the pattern of injuries and avoid them;

It is also mandatory to strengthen the trauma team in a tertiary care center during the lockdown as more cases get referred here;

ACKNOWLEDGEMENTS:

Dr ASHWIN S

Post Graduate, MD Community Medicine, CMC Vellore for helping in the Statistical Analysis of this study

REFERENCES

[1]. Bressan S, Gallo E, Tirelli F, et al Lockdown: more domestic accidents than COVID-19 in children Archives of Disease in Childhood Published Online First: 02 June 2020. doi: 10.1136/archdischild-2020-319547

[2]. Gupta R, Gupta R. Change in spectrum of handinjuries during COVID-19 lockdown period: Increase in mixer grinder and domestic violence related injuries in lieu of trauma sustained in outdoor activities. Indian J Med Sci 2020;72(2):65-70.

[3]. 2020, Vol. 12, No. S1, S199–S201 ISSN: 1942-9681 http://dx.doi.org/10.1037/tra0000866