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CHANGES IN PRESENTATION OF GENERAL SURGICAL EMERGENCY CASES IN EMERGENCY ROOM OF TERTIARY CARE GOVERNMENT HOSPITAL OF CENTRAL GUJARAT INDIA DURING LOCKDOWN

General Surgery

Dr. Adeesh Jain	Additional Professor, Department of General Surgery, S.S.G. Hospital & Medical College Baroda
Dr. Rahul Masne*	Resident Doctor, Department of General Surgery, S.S.G. Hospital & Medical College Baroda.*Corresponding Author
Dr. Sandeep Rao	Associate Professor, Department of General Surgery, S.S.G. Hospital & Medical College Baroda
Dr. Milind Patil	Assistant Professor, Department of General Surgery, S.S.G. Hospital & Medical College Baroda
Dr. Anshuman Tripathi	Senior Resident Doctor, Department of General Surgery, S.S.G. Hospital & Medical College Baroda
Dr. Saurin Chaudhary	Resident Doctor, Department of General Surgery, S.S.G. Hospital & Medical College Baroda
Dr. Chirag Panara	Resident Doctor, Department of General Surgery, S.S.G. Hospital & Medical College Baroda

ABSTRACT

Background :- CHANGES IN PRESENTATION OF GENERAL SURGICAL EMERGENCY CASES IN EMERGENCY ROOM OF TERTIARY CARE GOVERNMENT HOSPITAL OF CENTRAL GUJARAT DURING LOCKDOWN

Introduction :- People are encouraged to stay at home and to call the emergency number in case of illness. Patients with critical ailments and symptoms staying home for fear of going to an emergency room and contracting the coronavirus

Methods :-We did a retrospective observational study of patients who had attended the emergency room with general surgical illness.

Results :- We observed 54% decrease of cases of emergency surgery and change in types of cases compared to the corresponding months of the previous year.

Conclusion :-The biggest concern among some doctors from these two trends is that the damage from other illnesses can be irreversible. It is therefore crucial that patients identify key symptoms early and visit near treating hospital as soon as possible, regardless of the pandemic situation.

KEYWORDS

INTRODUCTION :-

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has now spread to most countries, with WHO declaring a COVID-19 pandemic on March 11, 2020[1]. The pandemic has tested the resilience of health-care systems, including hospitals, which were largely unprepared for the scale of the pandemic.

To date, in the world there are 7,394,960 confirmed cases with 3,702,725 recovered from the illness and discharged and 416,170 Deaths[2]. While in India there are 286,931 confirmed cases with 140,924 cases recovered from illness and discharged and 8106 deaths. In Gujarat there are 21,014 Confirmed cases with 14,365 Recovered and 1,313 Deaths.

The division of General Surgery, SSGH Vadodara is the hub center for surgical traumatic and non-traumatic emergencies in the area accounting for 14890 emergency surgical cases in 2019 corresponding to an average of 1230 cases/month. We observed 54% decrease of cases of emergency surgery and change in types of cases compared to the corresponding months of the previous year.

When all the hospitals catering the surgical cases were shut down due to which patients load in government tertiary care should have increased, but the reverse trend to what was expected was found.

People are encouraged to stay at home and to call the emergency number or the General practitioner in case of illness. Patients with critical ailments and symptoms staying home for fear of going to an emergency room and contracting the coronavirus. This could explain the reduced affluence to the ED in respect to the past. On the other hand, this cannot explain the tremendous reduction in the number of emergencies requiring surgery. As a matter of fact, there may be an increasing unknown number of patients suffering of acute abdominal and thoracic disease at home. The destiny of such patients is still unpredictable.

The biggest concern among some doctors from these two trends is that the damage from other illnesses can be irreversible. It is therefore crucial that patients identify key symptoms early and visit near treating hospital as soon as possible, regardless of the pandemic situation.

This study reports the changes in presentation of general surgical emergency cases in emergency room of tertiary care government hospital of central Gujarat, India during this covid – 19 pandemic lockdown phase.

METHODS :-

This is a retrospective observational cohort study of patients who had attended the emergency room of SSG Hospital Vadodara with general surgical illness during the February 2020 – April 2020. Data release and ethical considerations were discussed with an independent data monitoring and ethics committee. We collected only routine, anonymized data with no change to clinical care pathways. Data obtained were compared with the data of Feb 2019 to April 2019

Participants and procedure :-

All patients who had attended the emergency room of SSG Hospital Vadodara with general surgical illness during the February 2019 – April 2019 and February 2020 – April 2020. patients admitted from the emergency room and those discharged from the emergency room on the out-door patients bases were included in the study. We collected only routine, anonymized data with no change to clinical care pathways which included the type of general surgical illness with which patients came to emergency room and the frequency of each type of illness , age , sex and associated comorbidity of the patients, duration of illness before coming to emergency room , OPD vs IPD bases of treatment and mortality rates associated with the illnesses. In All the data variable was calculated , and studies and its relevance sorted out.

Data Analysis and outcome :-

Table 1 :- Average surgical patients presenting to SSGH emergency room.

Types of cases	Before lockdown (Average cases per day)	total cases studied	During lockdown (Average cases per day)	Total cases studied	Percentage decrease
RTA	14.16	878	4.87	302	65.6 %
NON VEHICULAR TRAUMA	6.09	378	3.85	239	36.77 %
ASSAULT	5.09	316	2.87	178	43.67 %
ABDOMINAL PAIN	8.40	521	4.87	302	42.04 %
SEPTIC	3.04	189	0.95	59	68.78 %
DOG BITE	5.95	369	1.96	122	66.90 %
BURNS	3.04	189	1.93	120	36.5 %
OTHERS	1.09	68	0.25	16	76.47 %
TOTAL CASES					53.99 %

Table 2 :- Road Traffic Accident

ASSAULT :-

		Before Lockdown		After Lockdown		P - Value
		Total cases	Percentage	Total cases	Percentage	
		868		302		
Age	<60 years	539	62%	258	83%	**<0.0001**
	>60 years	329	38%	42	14%	
Sex	Female	190	21.89%	52	17.22%	**< 0.22543**
	Male	678	78.11%	250	82.78%	
Types of Accident	Slippage of vehicle	554	63.82%	237	78.48%	**< .006**
	Collision	244	28.23%	50	16.56%	
	Other	70	8.06%	15	4.97%	
Comorbid condition						
	DM	117	13.48%	37	12.5%	**< 0.923**
	Hypertension	191	22.00%	71	23.67%	
	Others	78	8.99%	27	9.12%	
Type of injuries	Isolated	716	79.73%	217	71.85%	**< 0.0001**
	Multiple	182	20.27%	85	28.15%	
	1. Ribs / Chest	51	28.02%	17	20.00%	**< 0.0001**
	2. Abdomen	22	12.09%	9	10.59%	
	3. Limb	86	47.25%	46	54.12%	
	4. Spine	23	12.64%	13	15.29%	
GCS	Mild	633	72.93%	167	55.30%	**<0.0001**
	Morderate	130	14.98%	74	24.50%	
	Severe	105	12.10%	61	20.20%	
Mortality	Mild	49	7.74%	15	8.98%	**0.184**
	Moderate	14	10.77%	9	12.16%	
	Severe	19	18.1%	12	19.67%	
Mode of admission	Direct	364	41.94%	143	47.35%	**0.263**
	Referred	504	58.06%	159	52.65%	

Table 3 :- Assault

		Before Lockdown		After Lockdown		
		Total cases	Percentage	Total cases	Percentage	P - Value
Age	<60	232	73.42	144	80.90	**0.173**
	>60	84	26.58	34	19.10	
Sex	Male	243	76.90	152	85.39	**0.078**
	Female	73	23.10	26	14.61	
Injury	Blunt	302	95.57	172	96.63	**<0.85**
	Sharp	14	4.43	6	3.37	
Comorbidity	DM	104	12.22	21	11.80	**<0.0001**
	Hypertension	191	22.45	52	17.34	
	Others	78	9.16	21	7.25	
Type	Isolated head	271	85.76	165	92.70	**0.071**
	Multiple	45	14.24	13	7.30	
	1. Ribs/Chest	6	13.33	2	15.38	**0.82**
	2. Abdomen	24	53.33	5	38.46	
	3. Limb	15	33.33	6	46.15	
GCS	Mild	285	90.19	152	85.39	**<0.0001**
	Moderate	24	7.59	17	9.55	
	Severe	7	2.22	9	5.06	
Mortality	Mild	21	6.65%	14	7.87%	**0.3**
	Moderate	30	9.5%	18	10.11%	
	Severe	49	15.5%	29	16.29%	
Mode of admission	Direct	142	44.9	85	47.75	**0.834**
Mortality	Referred	174	55.1	93	52.25	

Table 4 :- Fall from height

		Before Lockdown		After Lockdown		
		Total cases	Percentage	Total cases	Percentage	P - Value
Age	<60 Years	235	62.17	202	84.52	**< 0.0001**
	>60 Years	143	37.83	37	15.48	
Sex	Female	82	21.69	45	18.83	**0.69**
	Male	296	78.31	194	81.17	
Type	Isolated	302	83	172	72	**0.075**
	Multiple	76	21	67	28	
	1. Ribs / Chest	18	23.68	17	25.37	**0.85**
	2. Abdomen	6	7.89	7	10.45	
	3. Limb	43	56.58	32	47.76	
	4. Spine	9	11.84	11	16.42	
GCS	Mild	275	72.75	131	54.81	**< 0.0001**
	Moderate	57	15.08	61	25.52	
	Severe	46	12.17	47	19.67	
Mortality	Mild	24	6.35%	19	7.9%	**0.91**
	Moderate	37	9.78%	25	10.46%	
	Severe	59	15.60%	39	16.31%	
Mode of admisson	Direct	159	42.06	115	48.12	**0.76**
	Referred	219	57.94	124	51.88	

Table 5 :- burns

DURATION	FLAME BURNS		SCALD BURNS	ELECTRICAL BURNS	Total	P - Value
	SUICIDAL	HOMICIDAL				
FEB-APRIL 2019	143		30	16	189	0.
	4	1				
FEB-APRIL 2020	79		36	5	120	02
	8	2				
Percentage decrease	44.76		- 20.00	68.75	36.51	

Table 6 :- Abdominal pain

		Before Lockdown		After Lockdown		
		Total cases	Percentage	Total cases	Percentage	P - Value
Region	Flanks	312	59.88	117	38.74	**.0007**
	Epigastric	84	16.12	36	11.92	**.15**
	Lower abdomen	73	14.01	64	21.19	**.025**
	Generalised	52	9.98	85	28.15	**< .0001**
Type of pain	Colicky/cramp like	355	68.14	194	64.24	**.61**
	Dull aching	166	31.86	108	35.76	**.42**
Clinical Diagnosis	Renal stones / hydronephrosis	183	35.12	91	30.13	**.29**
	Acute Cholecystitis	26	4.99	6	1.99	**.038**
	Perforation Obstruction Appendicitis Acute Abscess	36	6.91	25	14.90	**.50**
	Acute pancreatitis	9	1.73	7	2.32	**.036**
	Chronic pancreatitis	17	3.26	13	4.30	**.046**
	Acute urinary retention	40	7.68	29	16.23	**.38**

	Abdominal pain with USG - NAD	157	30.13	67	22.19	**.04**
	Others	53	10.17	24	7.95	**.33**
No. Of episodes	Recurrent	366	70.25	170	56.3	**0.02**
	First	155	29.75	132	43.7	
Treatment	Indoor	93	17.85	78	25.83	**0.66**
	Opd basis	428	82.15	224	74.17	

DISCUSSION :-

With the imposition of lockdown across India, we saw a dramatic change in the general surgical cases presenting to our emergency room of SSG hospital Vadodara . Cause of delayed presentation and serious condition being .

There is 66% decline in the patients with road traffic accident during the lockdown period as compared with the corresponding months of previous year. Among the patients of RTA, only those with moderated to severe injury attended the emergency. This accounted for a higher mortality rates in RTA patients group as only patients with moderate to severe injuries attended the emergency room.

We observed 42.02% decrease in patients with abdominal pain. And with the recent episode of pain with no past similar complains. patients with abdominal pain requiring emergency surgery were presenting very leading to high mortality as compared to corresponding months of previous year.

Similarly there was a significant decrease in patients with burns.

At the end we would like to say that there is a difference in presentation in emergency room during lockdown due to changes in habits of peoples and there compulsive homestay.

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