



**ORIGINAL RESEARCH PAPER**

**General Surgery**

**IMPACT OF COVID-19 OUTBREAK ON EMERGENCY SURGERY IN TERTIARY CARE HOSPITAL**

**KEY WORDS:** COVID-19, RTPCR, RAT

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**ABSTRACT**

**AIM:** To study the impact of covid-19 outbreak on emergency surgery in tertiary care hospital.  
**BACKGROUND AND OBJECTIVES:** In view of this pandemic Government of India has issued several guidelines to stop the transmission of covid-19. With the purpose to prevent overload of healthcare system and minimizing the likelihood of viral transmission, on March 24th 2020, the Govt of India has imposed several lockdown restrictions comprising social distancing, School closure and interruption of nonessential services. The lockdown restriction paired with widespread hospital fear experienced by most patients, contributed to discourage access to emergency department. Therefore, a study was conducted in the department of surgery, Silchar Medical College and Hospital to investigate how access to the emergency surgical activities were affected during lockdown.  
**METHOD:** A Retrospective comparative study has been done and data regarding patients who had access to Department of Surgery in SMCH were collected. The study period included precovid-19 era (i.e. 24 September 2019 to 24 March 2020, 6 months.) and a covid era ( 24 March 2020 to 24 September 2020, 6 months). A total 280 patients were operated on emergency basis in pre-covid era which reduced to 90 patients in covid Era (-68% of variation rate).  
**RESULTS:** During this study, it was observed that covid-19 pandemic caused a major reduction of emergency surgical procedure. The widespread hospital fear experienced by most patients, limited availability of RTPCR and RAT lead to delaying or postponing of certain types of urgent or emergency surgical operations, further increase in the post-operative complication and mortality in patients.  
**CONCLUSION:** COVID-19 related reduction or patient presenting to the Emergency Department resulted in significant delaying of time sensitive emergency procedures, further worsening the prognosis and unnecessary deaths.

**INTRODUCTION**

In view of this pandemic, Government of India has issued several guidelines to stop the transmission of Covid-19, with the purpose to prevent overload of healthcare system and to minimize the likelihood of viral transmission.

The lockdown restriction paired with widespread hospital fear experienced by most patients, contributed to discourage access to emergency department. Therefore, a study was conducted in the Department of Surgery, Silchar Medical College and Hospital to investigate how access to the emergency surgical activities were affected during lockdown.

**METHOD**

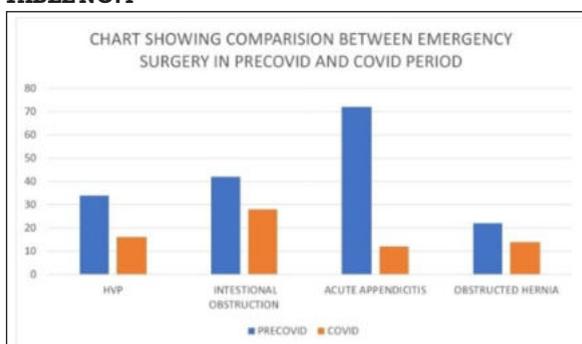
A Retrospective comparative study has been done and data regarding patients who had access to Department of Surgery in SMCH were collected. The study period included Precovid-19 era (i.e., 24 September 2019 to 24 February 2020, 6 months.) and a Covid era (24<sup>th</sup> march 2020 to 24<sup>th</sup> September 2020, 6 months). A total 280 patients were operated on emergency basis in precovid era which reduced to 90 patients in covid era (-68% of variation rate).

**DISCUSSION**

A total of 280 patients were operated on emergency basis in Pre-covid era which got reduced to 90 patients in Covid Era.

Sl.	EMERGENCY SURGERY	PRECOVID ERA	COVID ERA	TOTAL PERCENTAGE OF VARIATION
1.	HOLLOW VISCUS PERFORATION	34	16	-53%
2.	INTESTIONAL OBSTRUCTION	42	28	-43%
3.	Acute appendicitis	72	12	-83%
4.	Obstructed Hernia	22	14	-36%
5.	TRAUMATIC ABDOMINAL INJURY	60	24	-60%
6.	TOTAL	280	90	-68.14%

**TABLE NO: 1**



**COMPARATIVE STUDY ON MORTALITY ON PATIENTS (PRECOVID ERA AND COVID ERA)**

Sl. NO.	EMERGENCY SURGERY	PRECOVID ERA MORTALITY(%)	COVID ERA (MORTALITY(%))	TOTAL PERCENTAGE OF VARIATION (%)
1.	HOLLOW VISCUS PERFORATION	4 out of 34= 12%	6 out of 16= 37%	-68.8%
2.	INTESTIONAL OBSTRUCTION	3 out of 42= 7%	7 out of 28= 25%	-72%
3.	ACUTE APPENDICITIS	0 Out of 72= 0%	2 out of 12= 16%	-100%
4.	OBSTRUCTED HERNIA	1 out of 22= 5%	3 out of 14= 21%	-76%
5.	TRAUMATIC ABDOMINAL INJURY	4 out of 60= 7%	6 out of 24= 25%	-72%
6.	TOTAL	4%	26%	-85%

**RESULTS:**

During this study, it was observed that covid-19 pandemic caused a major reduction of emergency surgical procedure.

**FACTORS AFFECTED**

- Diversion of medical manpower and material in control of covid pandemic (i.e., Ambulance services, health staff, critical care equipment, OT and ICU.
- Limited access towards public transport due to lockdown.

- Fear and apprehension in general population towards hospital.
- Preference towards conservative management over surgery.

The widespread hospital fear experienced by most patients, limited availability of RTPCR and RAT lead to delaying or postponement of certain types of urgent or emergency surgical operations.

Due this delay and postponement of emergency surgeries it further lead to increase in post-operative complication and increase in mortality rate.

**CONCLUSION:**

COVID-19 related-reduction of patients presenting to the Emergency Department resulted in significant delaying of time sensitive emergency procedures, further worsening the prognosis.

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