

Impact of Covid-19 Pandemic on General Surgical Services at Karnali Academy of Health Sciences

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ABSTRACT

Background: Covid-19 pandemic that started from Wuhan China in 2019 December has made serious impact in the general wellbeing of people as well as the services provide by the health care institutions all over the world. This study aims to identify the impact of Covid-19 in the general surgical services provided by Karnali Academy of Health Sciences.

Methodology: This was a descriptive observational study conducted at Karnali Academy of Health Sciences (KAHS), Jumla from 16th September 2019 to 15th September 2020 AD. The data were obtained from records of various departments concerned with the delivery of the surgical services at the Hospital, which were then extracted to the Microsoft Excel and analyzed.

Results: Total 5,678 patients received general surgical services and the number of cases in each services remains somewhat consistent before lockdown however they tend to vary after lockdown. The average OPD cases decreased from 373 to 223 after lockdown and average surgeries performed were considerably decreased from 64 to 28. The average emergency services per month (160 vs. 189) and ICU admission (4 vs. 9) showed increment, however ward admissions (48 vs. 45) were fairly constant. The elective surgeries decreased considerably reaching to Zero during Apr/May and May/June periods. Average emergency surgeries per month were 35 before lockdown and 41 after lockdown; and average elective surgeries per month were 30 before and 4 after lockdown.

Conclusion: Surgical emergencies and ICU surgical services have not been decreased in KAHS although OPD and surgical procedures were decreased during COVID-19 pandemic in order to retain essential services as well as minimize risk of Covid-19 transmission.

Keywords: Covid-19, Emergency services, General surgery, OPD services, Pandemic

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INTRODUCTION

COVID-19, a single-stranded ribonucleic acid virus, was first detected in Wuhan in December 2019, a Hubei province in China.¹ Coronavirus transmission occurs through droplet infection or by physical contact with infected individuals.^{2,3} In contrary to assumptions, COVID-19 has shown no weakening in warm and humid conditions till date.⁴ The national lockdown, shut down of the national and international borders, the mandatory quarantine and isolation have undoubtedly become a part everyone life with unprecedented conditions.⁵

Until September 20 there were 30,071,314 confirmed and 944,887 deaths worldwide while there were 58,327 new cases and 379 deaths in Nepal due to COVID-19.⁶ During this pandemics it is inevitable that the surgeons and their team face challenge to deliver surgical services to their patients at the same time protecting themselves and the patients from Covid-19 exposure.⁷ There is widespread impact on the surgical practice ranging from staffing and workforce, prioritization of the procedures, intraoperative risk of viral transmission as well as on surgical education.⁸ Lockdown in Nepal was implemented from 24 March 2020, thereby halting all the non-emergency consultation and surgeries.⁹ The services at Karnali Academy of Health Sciences (KAHS) are in accordance with Medical council and Ministry of Health and Population.¹⁰

Similar problems are being faced by KAHS as the world is facing with respect to the services provided by it. The surgical patients are one of the most affected by the circumstances. This study aims to determine the impact of COVID-

19 pandemic on surgical services provided by the Hospital.

MATERIALS AND METHODS

Karnali province is the largest province of Nepal which consists of 10 districts namely Jumla, Dolpa, Humla, Mugu, Kalikot, Rukum-west, Jajarkot, Salyan and Surkeht. Jumla is situated in Karnali district of Karnali province which lies in the northern remote part of the province. Karnali Academy of Health Sciences (KAHS) lies in the heart of Jumla which serves people of Jumla and surrounding area mostly from Kalikot, Mugu, Humla, and Jajarkot as its catchment areas.¹¹

This was a descriptive observational study conducted at Karnali Academy of Health Sciences (KAHS), Jumla from 16th September 2019 to 15th September 2020 A.D (Ashoj 2076 to Bhadra 2077 B.S.). Ethical Approval was taken from the Institutional Review Committee, KAHS (IRC KAHS Ref. no. 2076/77/40). All patients who visited hospital to receive various surgical services were included in the study. The cases whose data were incomplete and all the previous follow-up cases were excluded from the study.

The desired data were collected from the records obtained from various departments concerned with the delivery of the surgical services at the Hospital. The surgical services were defined as all the services (OPD, IPD, ICU, surgeries and other minor procedures) received from surgical department and surgical procedures were denoted as the operations and minor procedures performed. The variables were then extracted to the Microsoft Excel and analysis of the data was

performed. The results were presented in various tables and figures.

RESULTS

During the study period 5,678 patients received General surgical services. The lockdown in Nepal started from 24th March 2020 (11th Chaitra 2076) so study period consisted 6 months prior and 6 months post lockdown announcement.

The number of cases in each services remained somewhat consistent before lockdown however they tend to vary after lockdown. The OPD and Procedural services decreased considerably But Emergency and ICU services increased in number. Admission to ward remained somewhat constant (Table 1).

Table 1: Month wise distribution of the cases before and after lockdown

Period	Months	OPD	Emergency	Ward	ICU	Procedures / Surgeries	Total services
Before lockdown	Ashoj(Sep/Oct)	266	202	44	6	60	578
	Kartik(Oct/Nov)	357	211	36	2	56	662
	Mangsir(Nov/Dec)	469	132	50	3	68	722
	Poush(Dec/Jan)	367	130	44	3	73	617
	Magh(Jan/Feb)	366	131	50	4	67	618
	Falgun(Feb/Mar)	415	154	64	4	60	697
	Total	2240	960	288	22	384	3894
After lockdown	Chaitra(Mar/Apr)	195	148	40	7	27	417
	Baisakh (Apr/May)	297	170	39	8	23	537
	Jesth(May/June)	215	183	47	6	19	470
	Ashar(June/July)	127	175	33	8	15	358
	Shrawan(July/Aug)	273	227	55	15	43	613
	Bhadra(Aug/Sep)	236	229	56	8	41	570
	Total	1343	1132	270	52	168	2965
Sum total		3583	2092	558	74	552	6859

The average OPD cases have decreased from 373 before to 223 after lockdown. The average surgeries performed were considerably decreased from 64 to 28. The emergency

services (160 vs. 189) and ICU admission (4 vs. 9) showed increments. However the Average ward admission (48 vs. 45) were fairly constant (Figure 1).

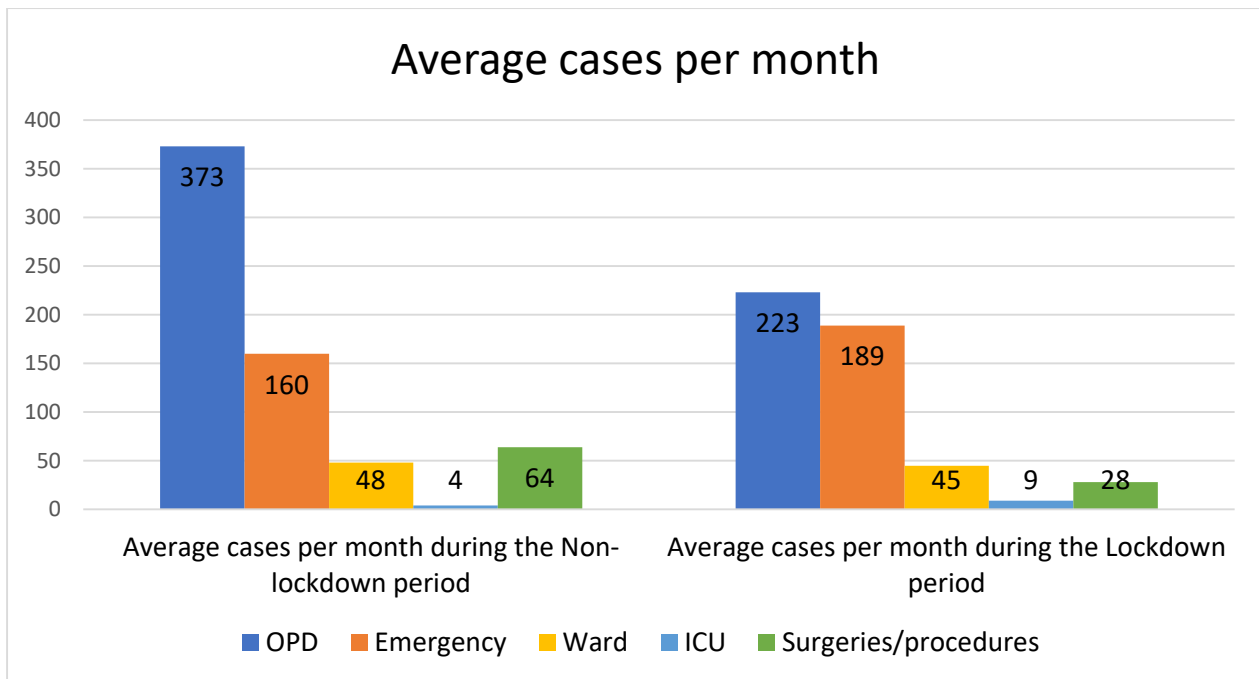


Figure 1: Average Cases per month during non-lockdown and lockdown period

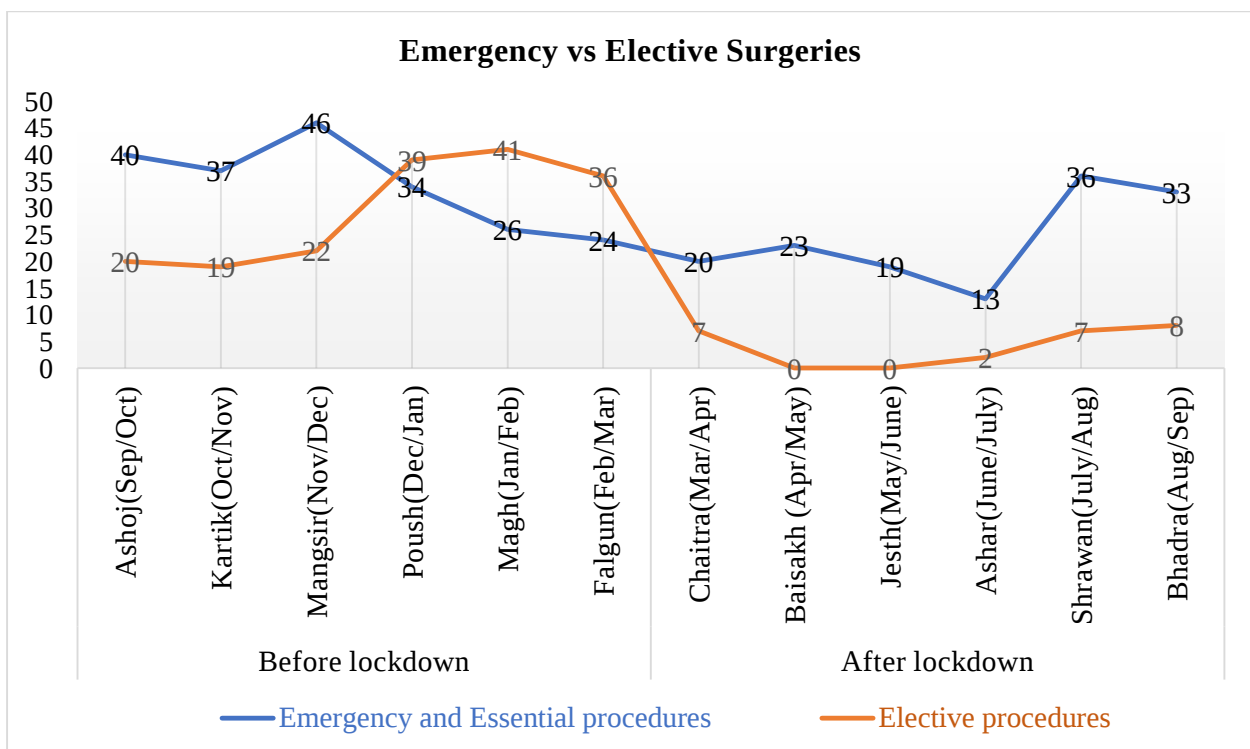


Figure 2: Monthly distribution of Emergency and Elective cases

The emergency surgeries showed variable changes decreasing slightly during initial period of lockdown then gradually increasing

afterwards. The elective surgeries however are decreased considerably reaching Zero during Apr/May and May/June periods (Figure 2).

Table 2: Average per month surgeries performed before and after lockdown

Period	Types of surgeries	Surgeries Performed	
		Total	Average per month
Before Lock down	Emergency	207	35
	Elective	177	30
	Total	384	64
After Lockdown	Emergency	144	41
	Elective	24	4
	Total	168	28

Average per month Emergency surgeries were 35 before lockdown and 41 after lockdown; and average per month elective surgeries were 30 before and 4 after lockdown. Total average per month were 64 and 28 before and after lockdown respectively (Table 2).

DISCUSSION

Our study period consists of total 12 months i.e. 6 months prior and 6 months after announcement of lockdown from 16th September 2019 to 15th September 2020 A.D. During this study period 5,678 patients received General surgical services. The number of cases in each services remains somewhat consistent before lockdown however they tend to vary after lockdown. The OPD and Procedural services decreased considerably But Emergency and ICU services increased in number. Admission to ward remained somewhat constant. This was because of the Government lockdown which led to closure of various general and non-emergency services as quoted by Ministry of Home and Affairs of Nepal.¹⁰

The average OPD cases have decreased from 373 before to 223 after lockdown. The average surgeries performed were considerably decreased from 64 to 28. The emergency services (160 vs. 189) and ICU admissions (4 vs.

9) showed increments. However the average ward admission (48 vs. 45) were fairly constant. The OPD cases were lowered because face to face appointments had to be avoided which could increase chances of infection both in the medical personnels and the patients.⁸ The decrease in procedures while increase in Emergency care and ICU admission could be because of the priority of the health care system to maintain emergency capacities including major trauma.¹²

The emergency surgeries showed variable changes decreasing slightly during initial period of lockdown then gradually increasing afterwards. The elective surgeries however were decreased considerably reaching to zero during Apr/May and May/June periods which was the period when pandemic started and national lockdown began. The fear of transmission and mortality was the main factor that lead preventing patient to seek various services except emergency.¹³

Average emergency surgeries were 35 before lockdown and 41 after lockdown and average elective surgeries were 30 before and 4 after lockdown. Total average were 64 and 28 before and after lockdown respectively. This was again the recommendation to halt all the non-essential services and only focus on

emergency procedures, reported from many countries.¹⁴⁻¹⁶

CONCLUSION

Surgical emergencies and ICU surgical services have not been decreased in KAHS although OPD and surgical procedures were decreased during

COVID-19 pandemic in order to retain essential services as well as minimize risk of COVID-19 transmission. Hospital needs to be prepared to manage all urgent conditions and also safeguard the health of its workforce during a pandemic.

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