Influence of COVID-19 Pandemic on Cardiology Practice at a Major General Hospital in Kuwait

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INTRODUCTION

Health-care systems and practices have faced enormous challenges with the unprecedented ongoing corona virus disease 2019 (COVID-19) pandemic which is caused by severe acute respiratory syndrome coronavirus 2. At the time of writing this document, the World Health Organization stated that COVID-19 has already affected more than 20 million people worldwide, causing >750,000 deaths.¹ In Kuwait, the first cases of COVID-19 were reported in March 2020. By August 2020, the number of people affected in Kuwait surpassed 75,000 and the death is reported to be 494.¹

The Ministry of Health implemented several measures in anticipation to the spread of COVID-19. Outpatient clinics and all elective procedures and surgeries were put on hold, while hospitalization was reserved for acute emergency cases. Partial and total curfews were implemented, restricting the public's movements. The public was advised to shelter at home and only go out for essential services. All nonessential workers were asked to work from home. Most facilities and services were ordered to close including public transport, mosques, shopping malls, restaurants, public parks, gyms, clubs, cinemas, and hairdressers among others.

CHANGES AT HOSPITAL LEVEL

Mubarak Al-Kabeer Hospital (MKH) is a major general hospital in Kuwait with a 678-bed capacity, affiliated with the Faculty of Medicine at Kuwait University. To date, we have admitted 3296 patients to COVID medical wards and 328 patients to COVID intensive care unit (ICU) wards. We had to implement our own measures to accommodate these numbers of patients. The measures taken included:
1. Changes to cardiology staff allocation and assignments
2. Relocation of cardiology wards
3. Implementation of short stay policy for cardiac patients.

Changes to cardiology staff allocation and assignments

The hospital administration and the ICU department recognized early on that cardiologists are the most suitably trained physicians who can work in the COVID ICU wards to supplement intensivists and anesthesiologists who normally manage the ICU.

We dedicated 16 of our cardiology staff to function fully under the ICU department directives. They were instrumental in providing continuous cardiac care for the critically ill COVID ICU patients including necessary echocardiography procedures and essential acute care. The remaining senior cardiology staff covered the essential cardiology services including coronary care unit (CCU), 24-h call service, urgent echocardiography, and cardiac catheterizations.

Relocation of cardiology wards

We noticed a 30% decrease in the admission rates of patients with acute coronary syndrome (ACS) in the 3 months of April to June 2020 compared with the same months in 2019 (total of 247 ACS patients in April to June 2020 compared with 354 in 2019) [Figure 1]. With
the increased need for COVID ICU beds and the noticed decrease in acute cardiac admissions, cardiology wards were relocated to COVID ICU wards.

The three cardiology wards were designated into COVID ICU wards. To accomplish this, the CCU and postcatheterization beds (25 beds) were relocated to the recovery room of the operating theater from May 17 to June 22 (10 beds).

**Implementation of short stay policy for cardiac patients**

With the dramatic reduction of available beds for acute cardiac cases, it was necessary to aim for speedy discharge of patients while ensuring they are discharged in a stable condition. Figure 2 shows the median hospital stay for ACSs patients during this period. Fifteen percent of ACS patients remained in the hospital for <24 h, while 64% of ACS patients were discharged <48 h after admission. These lengths of hospital stays for ACS patients are a new trend that we have never experienced before.

**CONCLUSIONS**

COVID-19 pandemic has and continues to devastate the health-care system. Countries, health-care systems and hospitals around the world have had to take extraordinary measures to adapt to the flood of sick
patients with COVID-19 while at the same time manage the existing patients with non-COVID-19.

In this article, we have outlined our experience at a major general hospital in Kuwait. This effort to highlight the impact of COVID-19 will continue with our planned project to study this impact in more details. We and others previously demonstrated that the incidence of myocardial infarction increased during times of stress due to wars and natural disasters.[2,3] However, during the current COVID-19 pandemic, several countries have reported fewer hospital admissions for ACS and fewer cardiac catheterization procedures.[4-6]

In Kuwait, we have noticed the same during our daily work at MKH. We plan to conduct a retrospective multicenter, cohort study that will be conducted in three major general hospitals in Kuwait. We intend to evaluate rates of hospital admissions for ACS, practice of cardiac catheterization, management, and hospital outcomes of ACS for 4 months (March to July) of 2019 and 2020, using the 2019 months as our control period.

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