SHORT COMMUNICATION

How do surgeons weather the storm of COVID-19 pandemic?

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SUMMARY

COVID-19 has infected more than 10 million people worldwide and it has become one of the biggest challenges in the modern medical history. Wearing of face masks, social distancing, effective hand hygiene and the use of appropriate personal protective equipment are important in flattening the curve of the pandemic. The role of surgeons in this battle against COVID-19 include curbing the spread of the disease, to protect and preserve the surgical workforce and to ensure the continuance of essential surgical services. We report our experience in dealing with the COVID-19 outbreak in a tertiary surgical centre in the Penang General Hospital in Northern Malaysia.

INTRODUCTION

COVID-19 had taken the world off guard and was declared as a world pandemic by the WHO on 11th March 2020. Malaysia was the country with the highest cumulative number of COVID-19 infections in South East Asia in early April. With the swift actions by the various government agencies, tremendous effort by the frontlines and the cooperation of the general public, the pandemic curve was flattened. We report here our experience in dealing with the COVID-19 outbreak during the peak period in March and April 2020.

Background of the Penang General Hospital

The Penang General Hospital (PGH) is a 1100-bedded tertiary hospital in Northern Malaysia. The Department of General Surgery consists of Upper GI, Colorectal, Hepatobiliary, Thoracic, Breast and Endocrine subspecialty cares in addition to the general surgery services. Being the designated hospital for COVID-19, the PGH had its first COVID-19 case on 5th March. Pre-operative screening and risk stratification was done in order to conserve resources. All elective surgeries were halted as the COVID-19 situation got worse in late March. Since the beginning of March, only cancer surgeries were done in order to conserve resources. All elective surgeries were then halted as the COVID-19 situation got worse in late March. Pre-operative screening and risk stratification was done for all patients according to the OT guidelines. Enhanced PPE were used for patients with low to moderate risk for COVID-19. Two designated operating room (OR) were allocated for COVID-19 or person under investigation (PUI) that required emergency surgery. These ORs had separate access from the main OT complex and they were equipped with positive pressure with 25 air change cycle per hour, two HEPA filters, individual scrub room and anteroom. OR staff were minimised to reduce the risk of exposure and powered air purifying respirator (PAPR) was used by all personnel in the COVID-19 ORs. There was a case of emergency laparotomy for blunt intra-abdominal injury for a PUI which was carried out successfully in the COVID-19 OR. None of the COVID-19 patients required surgical intervention during the study period.

Surgical wards

Eight wards, including one male surgical ward in the PGH were converted to COVID-19 ward. The numbers of in-patient...
in surgical wards were reduced with the decrease in elective admissions and a reduction in emergency admissions especially those from motor vehicle accidents due to the nationwide movement control order. No visitors were allowed in order to reduce the risk of exposure. All patients had to wear face masks with spacing of bed. Surgical patients with respiratory symptoms, history of COVID-19 contact or suspicious radiological findings were reviewed by the Infectious Disease Team prior to admission.

Staff redeployment
A total of 20% of surgical staff were deployed into the COVID-19 team. The others were then regrouped into six teams that consisted of two surgeons and three medical officers, respectively. Each team was assigned a portfolio based on six main areas: ward, surgical on-call, endoscopy, SOPD, COVID-19 surgical referral, and standby. This arrangement was aimed to reduce the crossover among staff and to preserve the surgical workforce if one of the teams needed to be quarantined due to COVID-19 infection. Moreover, the designated team for COVID-19 surgical referral would be better prepared and optimally trained in handling of PPE.

Departmental activities
Several measures were taken to avoid mass gathering of people. The daily pass-over was issued via a communication application through smartphones. Multidisciplinary team oncoligical meeting was modified to virtual meeting. Weekly departmental activities like the mortality review and journal club were put on hold.

Team morale and Psychological support
Besides learning to deal with a novel contagious virus, HCWs were also overwhelmed with unknown factors, anxieties and changes in their routine work. Updates on the management of COVID-19 and rescheduling of work were done from time to time to clear doubts among the staff and to ensure good team work towards the common goals. Encouragement and mentoring were thought to be important to boost the team morale with psychological referral when needed.

CONCLUSION
With the above mitigations, the essential surgical service in the PGH was preserved during the COVID-19 outbreak, to cater for emergency procedures and urgent cancer surgeries. The workforce was disciplined with strict adherence to protocols and adequate distribution of personal protective equipment to ensure the safety of all staff and patients. There was no COVID-19 infection reported among the staff. Furthermore, it contributed to the control of COVID-19 outbreak in the northern area of Malaysia during March and April 2020. The surgical department has now entered the recovery phase following COVID-19 and has gradually resumed all services and departmental activities in a controlled manner.

REFERENCES