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Gynaecological Surgery during the COVID-19 Pandemic: Is Global Screening Mandatory?

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Abstract

This study aimed to evaluate the results of universal preoperative screening for COVID-19 in gynaecological cases operated during the outbreak at a tertiary care hospital in Bangkok, Thailand. A retrospective descriptive study was performed on all patients undergoing elective or emergency gynaecological surgery during the pandemic period in Thailand (April 15 to June 5, 2020). Results of COVID-19 screening by symptom-based screening, risk-based screening, and RT-PCR for COVID-19 were collected from electronic medical records. Of the 129 patients who had undergone gynaecological surgery, none had RT-PCR positive for COVID-19. Symptom-based screening found no symptomatic patients positive for COVID-19. Risk-based screening found 4 patients (3.1%) who were exposed to suspected or confirmed cases of COVID-19 and 4 patients (3.1%) who were healthcare workers. In summary, routine preoperative RT-PCR for COVID-19 may need to be reconsidered in asymptomatic individuals in a low-incidence country in a well-controlled COVID-19 situation. . Larger studies are needed to determine the benefit of universal COVID-19 testing before surgery.

Keywords: Gynaecological; Surgery; COVID-19; Global Screening

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Introduction

COVID-19, an illness caused by a new coronavirus known as severe acute respiratory syndrome Corona Virus 2 (SARS-CoV-2), has been identified as the cause of the COVID-19 pandemic in the city Wuhan, China, since the end of 2019. The epidemic has spread rapidly in the region and other parts of the world, forcing the World Health Organization (WHO) to respond immediately by providing diagnostic development, by publishing advice on surveillance, treatment, and prevention. Person-to-person transmission through droplets, aerosols, contaminated hands or surfaces is the primary source of transmission. In addition, transmission from asymptomatic individuals during the incubation period has been reported. Although the infection is less deadly than previous outbreaks such as SARS (Severe Acute Respiratory Syndrome) or MERS (Middle East Respiratory Syndrome), it appears to be highly contagious compared to other outbreaks of other diseases including influenza [1, 2].

Due to the contagious nature of COVID-19, surgery has been discontinued worldwide. When performing surgery during the COVID-19 outbreak, special consideration should be given to preventing transmission of disease to the patient and surgical team, as well as preventing procedures from being performed in asymptomatic patients. , who are prone to morbidity and mortality after surgery. Several countries have introduced preoperative screening guidelines for COVID-19. Most screening methods are based on symptoms, history of exposure to suspected cases, RT-PCR for COVID-19, serologic testing, or preoperative chest Computed Tomography (CT) scan art. The preferred diagnostic test for COVID-19 is RT-PCR of specimens obtained with nasopharyngeal or pharyngeal swabs. Bronchoscopy is not recommended because of the potential for aerosol generation, which poses a risk of transmission to patients and healthcare workers. However, the benefit of preoperative screening remains unclear [3].

Discussion

Thailand is the second country to experience an outbreak of COVID-19 with the first case reported on January 12, 2020. Domestic and imported cases of transmission have steadily increased from less than 10 cases new cases per day in January 2020 and peaked at 188 new cases per day at the end of

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March 2020. This prompted the Thai government to announce emergency decrees to respond to the epidemic situation in the same month. During an outbreak, demand for medical equipment, Personal Protective Equipment (PPE), ventilators, and intensive care units high. Elective surgeries across the country have been postponed to ensure patient and surgical team safety and to preserve valuable medical equipment and PPE. Many hospitals have developed preoperative screening protocols for COVID-19 and guidelines on what to do [4].

This study was conducted to evaluate the outcome of common preoperative screening for COVID-19 in gynaecological cases operated during the outbreak at a tertiary care hospital in Bangkok. , Thailand. The incidence of COVID-19 in this country during the study period was 0-53 new cases per day. This retrospective descriptive study was performed at King Chulalongkorn Memorial Hospital, a tertiary care hospital in Bangkok, Thailand. Following approval from the Chulalongkorn University Medical School Research Ethics Committee, data were collected from all patients who underwent gynaecological surgery between April 15 and June 5, 2020. All patients underwent gynaecological surgery, elective or emergency, during this period. Since it is hospital policy to reduce surgical rates, only patients whose outcomes may be affected by delayed surgery, i.e. patients with confirmed or suspected gynaecological cancer, pre-cancerous or mild gynaecological diseases with severe, newly programmed symptoms. Testing for COVID-19 includes symptom-based testing, risk-based testing, and laboratory testing. Symptom-based screening was performed using a questionnaire about recent symptoms of fever, cough, runny nose, shortness of breath, and sore throat. Risk-based screening assessed by a questionnaire about possible exposure to COVID-19 after travel to endemic areas, history of exposure to suspected or confirmed cases, and history individual work in healthcare areas [5].

Nasopharyngeal swabs were obtained from all patients and sent for RT-PCR for COVID-19 using the Cobas SARS-CoV-2 assay (Roche Diagnostics, Indianapolis, IN. THE USA). Resident physicians trained in the obstetrics and gynaecology department performed nasopharyngeal swabs in a negative pressure chamber. All residents performing nasopharyngeal swabs have been trained by an infectious disease specialist. If the RT-PCR result is positive, surgery will be postponed. The "no-visitor policy" also applies during this time. Patients are required to wear a mask at all times in the hospital [6].

Data analysis was performed using SPSS software version 22.0 (SPSS Inc., Chicago, USA). Continuous data are presented as mean (Standard Deviation (SD)) or median (interquartile range (IQR)), while categorical data are presented as numbers and percentages. During the 52-day period (April 15 to June 5, 2020), 122 patients were scheduled for elective gynaecological surgery and 9 patients had emergency gynaecological surgery. One patient with gynaecological cancer was aborted due to neutropenia and another had thrombocytopenia. For the remaining 129 patients (patients whose condition could not be rescheduled), the baseline characteristics are presented in Table 1. Most of the patients were Thai (98.4%), with Average age is 48 years old. There were 33 patients with suspected or latent cancer, including 24 patients scheduled for gynaecological cancer surgery, 4 patients with breast cancer, 2 patients with lymphoma, and 1 patient with gastric cancer, and remaining 2 patients are believed to be endometrial cancer patients who underwent segmentation surgery. Symptom-based screening found no symptomatic patients positive for COVID-19. Risk-based screening, assessed by questionnaire, found 4 patients (3.1%) who had been exposed to suspected or confirmed cases of COVID-19 and 4 other patients (3.1%) are healthcare workers who are considered high-risk contacts of COVID-19 cases. There were no patients from endemic countries. An RT-PCR nasopharyngeal swab for COVID-19 was performed in all 129 cases. The results were all negative. Hospital procedures state that in an emergency where pre-operative results cannot be published, all medical staff in the operating room use full PPE [7, 8].

Conclusion

Surgical characteristics are shown. There were 120 elective surgeries (93.0%) and 9 emergency surgeries (7.0%). Primary surgery was performed in 78 patients (60.5%). Minor surgeries such as curettage, colectomy, incision and drainage or suture of the sac were performed in 51 patients (39.5%). There were 24 gynaecological cancer patients operated during this period (18.6%) and 10 cases underwent laparoscopic surgery during this time (7.7%). Postoperative complications are shown. Eight patients (6.2%) required admission to the intensive care unit. A small number of other complications were detected including intestinal injury (0.8%), bladder injury (0.8%), and wound infection (0.8%). There was 1 case of respiratory complications after surgery. Patient has an ovarian mucinous cyst and has undergone a total abdominal hysterectomy with bilateral salpingo-oophorectomy and surgical staging for suspected ovarian cancer pre operatively. She had a fever in the postoperative period. Postoperative chest X-ray showed uneven infiltrates in the left lower lung area compared with normal preoperative chest X-ray. She had no respiratory symptoms and her chest X-ray improved significantly within 48 hours. Aspiration pneumonia has been diagnosed. All patients were followed up postoperatively after 2 weeks according to hospital procedures to report pathology and follow up post-operatively. No patient developed postoperative complications or developed COVID-19 during this time [9, 10].

Acknowledgement

None

Conflict of Interest

None

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