Risk And Challenges of Gynaecological Surgery During Covid 19

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Abstract: The emergence and spread of COVID-19 in the United States led to the rapid curtailment of elective surgical procedure. Concerns by health care personnel of viral transmission intraoperatively require appropriate use of PPE and pre-operative COVID-19 testing. Implementation of mitigation strategies around aerosol-generating procedures such as laparoscopy protects health care personnel involved in the surgical care of the patient. So, this chapter is to discussed the various considerations necessary to safely perform gynecologic surgery in the setting of a viral pandemic.

Key Words: — ***Covid 19, surgery, gynecology, protection.***

I. Introduction

The Coronavirus Disease 2019 (COVID-19) pandemic has forced us to completely reorganize our health care system to accommodate patients infected with severe acute respiratory syndrome coronavirus 2[1]. This exceptional situation has placed severe constraints on the provision of care to patients with other conditions, and especially those with cancer. Although many cancer patients, including those with gynecologic cancer, require surgery, access to both operating theaters and to postoperative recovery rooms is limited [2]. In addition, cancer care requires a multidisciplinary approach, which often involves adjuvant treatment with chemotherapy and/or radiotherapy, requiring multiple visits to health care facilities. These visits increase the risk of contracting COVID-19, which is more likely to be severe in patients undergoing chemotherapy or surgery [3]. In mid-March, 2020, recommendations were released to postpone elective surgical interventions when feasible. This deferment of elective surgery led to discussions surrounding methods of adjudicating priority for which cases outside of emergencies could proceed during this time of restricted surgical access. Gynecologic surgery in the midst of this pandemic also raised concerns regarding transmissibility of the virus in the intra-operative setting.

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As a result, this chapter will focus on methods by which to triage gynecologic surgical procedures and upon entry into the operating room, ways to mitigate potential transmission of COVID-19 to surgeons and operating room personnel [4]. Whenever possible, cancer-specific diagnostic or treatment guidelines should be applied as closely as possible and without delay. In the case of endometrial cancer, for example, uterine specimens must be sent for histopathologic examination in patients with post-menopausal metrorrhagia, magnetic resonance imaging must be performed as part of the preoperative assessment, and patients must be treated according to guideline recommendations and preoperative assessment of risk factors [5]. Patients who become infected with SARS-CoV-2 while being treated for cancer have a greater risk of developing a severe form of COVID-19[6]. According to data from China, patients with cancer are four to eight more times likely to die of COVID-19 complications in the 4 weeks following chemotherapy or surgery than those without cancer.

II. Gynaecological Surgery Procedure

Both patients and providers are at significant risk when procedures are performed in patients with COVID-19. While there are limited data describing the operative outcomes of women with COVID-19 who undergo surgery, early reports suggest that these patients are at significant risk for perioperative morbidity and mortality. The influx of patients hospitalized with COVID-19 poses a number of logistical challenges for hospitals. Additional inpatient facilities, including intensive care units, may be needed at centers in regions with a high burden of COVID-19 disease [7]. Hospital surge planning may require operating rooms, post anesthesia

care units, or other perioperative facilities to be converted into clinical care units for COVID-19 patients. Despite the desire to limit operative procedures, urgent and emergent surgical procedures need to continue to be performed in some capacity. As surgical triage of patients poses a number of ethical considerations, several risk stratification schemas have been developed to help triage patients when operating room capacity is limited [8]. In general, these triage systems attempt to quantify and balance the medical needs of patients in conjunction with logistical constraints of a hospital and region. Additional characteristics of the procedure including anticipated length of hospital stay, potential for ICU admission and risk of complications also influence decision making.

III. Surgical Mitigation

There are some clinicians who have advocated for universal respiratory precautions in the operating room based on the fact that COVID-19 is primarily a respiratory disease transmitted through droplets and aerosolization. A more pragmatic approach to managing PPE requirements would be one based on pre-operative COVID-19 status [9]. On the other hand, elective and semi-urgent cases can undergo PCR-based SARS-CoV-2 testing and based on results manage appropriate PPE requirements. Such testing should take place no earlier than 72 h prior to a scheduled operative procedure and once obtained, individuals should practice social distancing and continue to wear a surgical mask. If possible, mitigation strategies for COVID-19 should begin at least 2 weeks prior to a scheduled operative procedure [10]. It should be noted that antibody testing for SARS-CoV-2 is not appropriate for pre-operative testing. Implementation of pre-operative testing not only preserves PPE such as N95 respirators and protects health care personnel (HCP) involved in the surgical care of the patient but also helps to identify pre-symptomatic patients who may be at higher risk for adverse clinical outcomes if they undergo surgery prior to developing overt illness with COVID-19[11]. Mitigation strategies can begin prior to incision by first of all, having only anesthesia personnel present in the room during intubation and extubation since that is an aspect of peri-operative care that is known to be an aerosol-generating procedure. Some have even gone so far as to advocate for a barrier enclosure or shield to be used during endotracheal intubation. Hence a multi-faceted approach should be undertaken which includes appropriate PPE and protocols surrounding endotracheal intubation as discussed before in addition to smoke evacuation devices with a suction and filtration system, as available [12]. Ultimately these procedures should be done in rooms with proper filtration and ventilation.

IV. Patients Care Methods

Using a paper-based questionnaire, patients were asked about medical care and their experiences during the pandemic. The study was performed during Covid periods. The questionnaires were developed by an interdisciplinary team from the fields of urology, medical ethics, and gynaecology. The completion of the questionnaires was explained and supervised by trained staff. The survey broached the issues of (1) the general perception of the pandemic, (2) concerns about infection during patient care, (3) concerns about inadequate treatment due to pandemic restrictions, (4) perceptions of pandemic-related safety procedures, and (5) the physician–patient relationship, particularly the trust of patients in their treating physicians during COVID-19.

V. Results And Discussion

The questionnaires were distributed in the outpatient departments. No distinction was made between the causes of the medical consultation. The patient collective accordingly includes all gynaecological diseases [13-15]. The questionnaire also does not indicate the type of illness of the participants; only a classification into acute or chronic is requested. No information is available about the planned therapy. Completion of the questionnaires was voluntary for the patients, and there was no personal advantage, which explains the relatively low number of participants for the period. The median age range was between 41 and 50 years and distributed among the age groups as follows: 18–30 years (14.1%), 31–40 years (20.5%), 41–50 years (21.4%), 51–60 years (20.5%), 61–70 years (12.6%), and > 70 years (10.7%). None of the answers correlated with the age of the patients. 33.0% of patients classified their disease as acute and 26.6% as chronic. 32.1% of patients could not attribute their symptoms to an acute or chronic course. The survey showed that patients perceived the flow of information in this pandemic situation very differently. While 52.9% of the patients have the impression that the situation has generally been sufficiently discussed, 28.3% stated that this was rather not the case. 18.8% of the patients did not make a clear positive or negative statement.

VI. CONCLUSION

It is the responsibility of treating physicians to provide comprehensive information on the consequences of the COVID-19 pandemic, in addition to the prescribed education. This is confirmed by the broad consensus of measures, such as postponing appointments or prohibiting visits by patients' relatives [16]. Whether or not elective surgery is completely halted, emergent cases will continue to present and require operative management thereby necessitating a strategy around use of PPE as well as COVID-19 testing. Given the paucity of data surrounding the transmission of SARS-CoV-2 intra-operatively, various considerations can be undertaken to mitigate the risks of infection to operating room personnel [17]. Therefore, a trustful relationship between physician and patient seems to be even more important during the COVID-19 pandemic [18]. This may be accomplished by absolute transparency and information about all regulations in the hospital and during therapy. Another study demonstrated that the confusion regarding information about COVID-19 was significantly higher among those who had lower health literacy.

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