Staged Stratification of Minor Gynecological Procedures in COVID-19 Era: Postpone or Proceed?

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Abstract: ***Coronavirus disease 2019 (COVID-19) pandemic requires indispensable improvement in healthcare response scale involving maintenance of hospital-based services while preparing for high-acuity care for infected individuals simultaneously. Management of essential personal protective equipment (PPE) and adequate resources reallocation are vital to protect patients and healthcare workers alike. Every hospital and healthcare system needs to evaluate its capability and capacity in facing this challenge in the light of emergency surgical services principles and select guidance to formulate decision-making strategies. Effective strategy by tiered reduction of surgical cases through multidisciplinary approach along with the utilization of structured risk category assessment scheme is universally applicable in a wide range of institutions. Prompt implementation of this strategy is expected to facilitate optimal delivery of minor gynecological procedure services.***

Keywords: staged stratification, minor procedures, gynecology, COVID-19

1. Introduction

Amidst the ongoing globalization and modernization current, individuals across the globe were faced with staggering massive hotspots of novel pneumonia recently discovered in Wuhan, Hubei province in December 2019[1-3] This pandemic manifests as coronavirus disease 2019 (COVID-19) caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2).[4] It is highly capable of person-to-person transmission and has spread widely in China and the following other 190 countries and territories.[3] Finally, on March 12, 2020 WHO announced COVID-19 pandemic status.[5]

Epidemiological data accumulation up to May 1, 2020 showed a total of 3,105,207 cases globally with up to 224,172 deaths.[3] The first two cases were initially reported in Indonesia on March 2, 2020.[6] According to Ministry of Health of the Republic of Indonesia, as many as 10,118 cases and 792 deaths were confirmed until May 1, 2020.[7] Mortality rate of 7.8% in Indonesia was among the highest rates in Southeast Asia.[3]

COVID-19 had caused a tremendous amount of confusion to healthcare system in the context of performing specific healthcare interventions or medical procedures. Broad clinical manifestations of COVID-19 further complicated the prediction of its impact on healthcare services as implicated in minimal anticipation of pandemic peak and case detection.[8] Entailing fatal consequences were predicted considering public stigmatic perspective on COVID-19 confirmed individuals. The ideal practice of proper and open management is slowly transitioning into concerning decision-making dismay due to the acts of falsification by potentially prejudiced individuals.

Constellation of huge multisectoral impacts the pandemic inflicted has led to multidisciplinary approach of health policy adoption in various countries. On the other hand, there are ongoing controversies as diagnostic, management, and prevention aspects of COVID-19 remain unsolved. Furthermore, numerous repercussions arouse as a self-perpetuating cycle in all aspects of the global healthcare system, which especially holds true in the field of operative gynecological services.[9,10] Surgical procedures require longer contact duration, generate body fluid contaminants, and infection status uncertainty – all of which would ultimately increase the risk of infection.[10] Preceding issues mainly contributed to controversies in surgical decision-making.

2. Literature Review

2.1 Adjustment and Challenge in Minor Gynecological Procedure

Minor gynecological procedure encompasses any mild operative intervention of female reproductive organ under local anesthesia. Interventions that comply with this category are Bartholin cyst marsupialization, dilatation and curettage or endometrial biopsy, cervical polyp extirpation, and benign vulval lesion extirpation.[11] Due to the reasonable safety with minimal risk in these procedures, it is achievable even in the setting of primary healthcare facility.

The role of surgical services in time of pandemic is crucial with modifiable components adjusted to deliver optimal service. Relevant variables to consider to determine service components adjustment are impact calculation, duration estimation, perioperative and institutional resources dependence, and the impact of adjustment itself to affected and unaffected individuals likewise. The decision on cancellation, postponement, and priority of surgical service is often dependent on specific threats, although timing is currently the most formidable challenge. Decision-making

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principles guidance is deemed identical regardless of the nature of the threat (i.e. COVID-19).[8]

Current obstacles for hospitals or healthcare system in evaluating capability and surge capacity in pandemic era highlight the importance of management principles analysis for elective surgical services. Based on past review of healthcare emergency response in both hospitals and community, systematic and staged justification principles in surgical services to create capacity and calculate specific COVID-19 risk is highly needed.[8,10] Aforementioned rationale could also serve as a guide for decision-making in minor gynecological operative procedure planning.

Critical elements in managing surgical services are organized in coordination with the whole hospital system, including diverse surgical divisions, anesthesia, and other care services. American College of Surgeons (ACS) recommended each healthcare system and surgeon to review carefully every elective procedure scheduled to minimize, postpone, or cancel the procedure until infrastructure assurance supports special or critical care.[9] Statement from American College of Obstetricians and Gynaecologists (ACOG) on gynecologic procedures encouraged hospitals to consider surgical schedule modification in areas where COVID-19 is prevalent.[10] Rescheduling for elective procedures should call for the whole healthcare system with particular attention to the critical demand.

Communication plays a critical role in health emergencies and different elective case managements could impair consistent information mediation to both health institutions and the public. Community practice and non-affiliation surgical facility have to take part in this process, therefore hold the same vision and mission in delivering services. Further spreading of COVID-19 infection would result in resource depletion and therefore, would render life-threatening cases being prioritized over elective cases.[8]

2.2 Mechanism and Potential of Staged Stratification of Surgical Procedures in COVID-19 Era

Guidelines on managing scheduled elective surgical procedures in massive COVID-19 cases observation were scant and differed significantly among institutions. While hospital authorities work on restructuring logistics planning, the continuity of surgical services is limited to maintaining the balance between hospital finance and maximizing healthcare workers capability to deliver high-quality care.[8] Principles as stated by Soremekun et al. (2011) on developing specialistic case category and assigning schedule for staged and coordinated cancellation or postponement provide an excellent reference.[12]

Determination of elective staged stratification is generally dependent upon cancellation or postponement trigger factors, COVID-19 morbidity and mortality risks, urgency level, and the impact on bed capacity in a hospital or health facility. Trigger factors might include community COVID-19 transmission, limited inpatient capacity, personal protective equipment (PPE) shortage, or urgent case analysis through team review. Morbidity and mortality risks of COVID-19 has to be taken into account and classified into high or moderate risk. Low or moderate urgency level is related to the possibility of 14 days postponement. Impact on bed capacity may vary for inpatients whilst sparing one day care service patients unaffected.[8]

Overall consideration regarding staged stratification significant indicators could involve subgrouping patients based on their respective proceeding status or local transmission evidence. Scheduled elective surgical procedure in patients with high risk of COVID-19 infection is a great candidate for postponement. This postponement applies to individuals with immunocompromised, advanced age (i.e. over 70 years), and respiratory or other comorbidities such that their presence in healthcare institution posed greater danger of COVID-19 transmission exceeding the surgical postponement.[8]

One day care or inpatient care could potentially be postponed if hospital resources did not suffice.[8,13] Contrarily, in the case of PPE shortage referral to inpatient off-site or independent healthcare would help to avoid burdening hospital-based resources. Although individuals requiring benign gynecological procedures or pediatrics tend to be in a lower risk of viral morbidity, postponement is opted for whenever surgical intervention is judged inessential. On the other hand, the absence of COVID-19 community transmission evidence should be accompanied with prompt outpatient care for low-risk individuals to minimize resources need and post-crisis workload. In this circumstance, specific community environment and COVID-19 risk should be carefully assessed.[8]

Certain urgent cases demanding response within 7 to 14 days could benefit from strategic surgical scheduling adjusted with available resources. Terminal cleaning of the operating room, PPE preparation, or staff mobilization should be prioritized over somewhat less urgent cases such as a benign tumor or missed abortion in the pandemic setting. Individual risk assessment is needed in such cases.[8,14]

Categorization strategy is heavily reliant upon surgeons in identifying the key factors pertaining both patient and intervention being planned to weigh relative impacts of these factors on patient's overall health and seek for peer reviews on available confoundings. When dealing with symptomatic surgical patients or COVID-19 positive status, the multidisciplinary team should take part in an integrated analysis of risk and benefit for patients and healthcare services.[8]

Effectiveness of the strategy emphasized on multidisciplinary involvement of the whole healthcare system as a unit and application of structured risk assessment scheme. Massive response and participation of healthcare providers worldwide like never before are requisite to maintain the balance between hospital-based resources and high acuity care for COVID-19 infected patients. Hospitals and healthcare services have an obligatory role in protecting patients and healthcare providers by ensuring PPE availability and resources facility restructuration primarily in minor gynecological procedures justification.

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Despite the relatively safe nature of minor gynecological procedures, equal contribution from health community is an integral part that is crucial in gynecological health services. Local transmission of COVID-19 urges community to be open about their status and ultimately, avoid any misleading in prioritizing minor surgical interventions. Healthcare workers are required to don adequate PPE complying to available standard with regard to transmission risk reduction. Sufficient PPE supply by hospitals or healthcare clinics is mandatory to warrant optimal standard operating procedure implementation. An excellent collaboration of the entire elements encourages transmission risk mitigation in minor gynecological context..

3. Conclusion

COVID-19 pandemic put a significant burden on healthcare system throughout the world. This emergent situation serves as a formidable challenge for healthcare providers in delivering optimal practice. Minimizing burden through staged stratification aids in balancing risk and benefit of operative procedures in pandemic era

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