

Impact of the COVID-19 Pandemic on Urology Practice in Indonesia: A Nationwide Survey

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Firstly discovered on December 2019 in Wuhan, China, coronavirus disease 2019 (COVID-19) has spread rapidly and widely throughout the world.¹ The first positive case in Indonesia was confirmed in early March 2020 and this number has increased exponentially until today. This pandemic has forced changes in many aspects of life including healthcare practices. Even though management of COVID-19 is a “different field” to urology practice, COVID-19 is having a great impact on daily urology practice. Therefore, we conducted a nationwide survey to investigate the impact of the COVID-19 pandemic on urology practice in Indonesia through a survey.

A survey was distributed using Survey Monkey (www.surveymonkey.com), a cloud-based online survey, in April 2020 to urologists registered in the Indonesian Urology Association (IUA) database and urology residents in all centres across Indonesia. Some of the questions within the survey were adapted from questionnaire developed by Societe Internationale d’Urologie (SIU).^{2,3} Demographic, practice pattern of urologist, and prioritization of surgery during COVID-19 pandemic was investigated by this survey. For urologist practice pattern, this survey also differentiated and compared between public and private practice.

Of the total 485 eligible urologists and 220 eligible urology residents as a respondent, 369 urologists (76% response rate) who came from 30 out of 34 provinces and 220 urology residents (100% response rate) participated in this study with 89.7% and 97.7% overall completeness, respectively. The urologist’s median (range) of age is 40 (30-77) years old and urology resident’s median (range) of age is 30 (24-38) years old. Thirty-five out of 369 urologists (9.5%) and 59 out of 220 (24.8%) had been appointed as suspected case with two urologists and five urology residents had tested positive for COVID-19.

Several strategies had been developed by urologists and their hospitals to adjust towards the COVID-19 epidemic situation, such as physician rotation and reduction of working hours. In terms of urology resident training, Indonesia has five urology centres, each of which has affiliated hospitals where residents undergo rotation. However, during COVID-19 period, all centres called resident back from the affiliated hospitals, except Bandung urology center in West Java Province.

Outpatient services during COVID-19 pandemic

During this pandemic, more than two-thirds of respondents still preferred to continue face-to-face consultation in both public and private hospital. Only small proportion of respondents (2.2% in public hospital and 6.2% in private hospital) stopped all outpatient clinic consultation.

Surgery services during COVID-19 pandemic

The survey found that more than 60% of urologists preferred to postpone the majority (66%) or all elective surgery in both public and private hospitals. Moreover, 77% and 68% respondents cancelled the surgery if the patient had COVID-19 related symptom or required intensive care unit service after the surgery, respectively.

Amongst urologists who continued to conduct elective surgeries, most conducted COVID-19 screening as part of elective surgery preoperative preparation (74.6% and 81.7% at public and private hospitals, respectively). More than 50% of the urologists who continued to conduct elective surgery had never performed laparoscopic surgery in their practice. However, of those who had previously performed laparoscopic surgery, the majority (95.3% at public hospitals and 97.1% at private hospitals) did not continue to perform laparoscopic procedures

during the COVID-19 pandemic. Measures that had been taken to prevent SARS-CoV-2 transmission in public or private hospitals, included reducing the number of operating rooms (ORs), reducing the number of staff (59.5% and 63.9%, respectively), and not rotating staff in the OR during surgery (26.6% and 33.6%). A small proportion of respondents (1.2%) had cancelled surgery that required general anaesthesia (GA) or had entered the OR after the intubation was completed by the anaesthesiologist.

When treating patients who required emergency surgery, most urologists (80.7% and 84.3% at public and private hospitals, respectively) treated patients as COVID-19 positive.

Use of Personal Protective Equipment

The survey showed that surgical mask (> 90% in both public and private hospital), face shields (about 80% in both public and private hospital), medical gloves (about 80% in both public and private hospital), and surgical cap (about 80% in both public and private hospital) were well utilized and provided by the hospital for urologist and urology resident. Medical gown availability was appeared to be more limited among urology residents as compared to urologists (about 80% for urologist vs 60% for urology resident). For N95 mask, the survey revealed that only 60% of urologist and urology resident used this type of mask at public hospitals as compared to more than 90% of urologists in private hospital (however only provided by 50% private hospital).

Selection and prioritisation of surgery

The urologists' and urology residents' opinions regarding selection and prioritisation of surgery is shown in **Figure 1**.

Since the number of COVID-19 patients is still increasing in Indonesia, adjustments to this situation are vital to healthcare providers in order to provide the best service to patients during the pandemic, while still maintaining the highest possible safety. From the data retrieved from the survey, it found two urologists and five urology residents reported having contracted COVID-19. To prevent further spread of infection in the future for healthcare provider and patient in the hospital, several step should be made, such as zoning to separated non-COVID-19 patient from COVID-19 patient, screening of COVID-19 using polymerase chain reaction (PCR) test to all elective surgery patient, PPE utilization and its provision by both hospital and the government, excellent patient selection for elective surgery, and optimization of tele-consultation.

Regarding urology service, (IUA), as an organization accommodating all Indonesian urologists, has published recommendations for urologists during the COVID-19 pandemic. These recommendations cover outpatient clinics, surgery services, PPE use, and patient selection,⁴ thus could be useful guidance for Indonesian urologist to provide best care to patients during COVID-19 pandemic, while still maintaining safety of their own health.

This survey showed that face-to-face consultation remained the primary consultation method for outpatient services. Even though telemedicine is being developed and the Indonesian government had been proactive by providing national policy support and for the development of telemedicine, telemedicine is still unpopular among urologists of whom less than one quarter have used it.^{5,6} Therefore, this COVID-19 pandemic should be a momentum to develop this online consultation tool.

In addition to emergency surgery, there are several urological procedures which are recommended to be done due to risk of disease progression. IUA recommends that procedures for patients with severe disease should not be deferred, including surgery for muscle invasive bladder cancer or in situ bladder cancer, testicular tumours, cT3+ kidney tumours, high-risk prostate cancer which cannot be treated by radiation therapy, upper tract urothelial tumours, adrenal cortical carcinoma, and penile tumours. To help urologist or other surgeon decide surgery prioritization, a scoring tool could be used, such as medically necessary, time-sensitive (MeNTS) scoring system.⁷

Conclusion

This survey had a high response rate and provides a picture of the impact of COVID-19 on urology practices in Indonesia. This survey revealed that the COVID-19 pandemic impacted urology services in Indonesia which could be seen in a reduction of elective surgery number and outpatient clinic practice pattern. Moreover, no difference was observed between public and private hospital during COVID-19 pandemic.

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Figure 1. Selection and prioritisation of surgery: (a) urologists' surgery selection, (b) urology residents' opinions towards surgery selection, (c) urologist's assessment of surgery priorities, and (d) urology residents' opinions of surgery priorities