Urological Services in the Era of COVID-19

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On 26 February 2020, the first case COVID-19 was confirmed in Greece and on 11 March 2020, the World Health Organization declared a pandemic. Health service systems applied significant changes to maintain essential health services delivery and mitigate the risk of collapse.[1] The hospitals reduced inpatient and outpatient workflow and canceled or suspended all non-emergent and routine surgical procedures. However, these decisions have consequences that are not yet fully understood, and more research is needed to shed light on this field.

Urologic services on our hospital have also been affected since the outbreak of pandemic. All the minor elective cases done under local anesthesia (cystoscopies, prostate biopsies, and urodynamics) were deferred for the period between mid-March- April 2020.The decision to operate was made only for emergency cases and high risk for progression cancer cases. Some of the emergency procedures which required surgical management were hematuria patients who did not improve despite conservative measures, acute scrotum, renal colic intractable to intravenous pain relief, urosepsis with ureter obstruction and ureter obstruction with renal deterioration and nephrectomy due to renal abscess. Female patients or males without big prostate who required insertion of a double J stent, we opted to treat them under local anesthesia. In other cases with anticipated intraoperative difficulty e.g. impacted stones, we elected to perform them under intravenous sedation or formal anesthesia. All the emergency percutaneous nephrostomies for renal decompression were placed under local anesthesia.

Elective cancer cases with high risk for stage progression were directly proceed to surgical treatment. During the pandemic, we treated two cases with upper tract urothelial cancer (cT1, high grade), one patient with muscle-invasive bladder cancer with radical cystectomy after neoadjuvant chemotherapy, two cases of prostate cancer with Gleason score 7 (4+3) who could not undergo external beam radiation therapy. All renal and ureteric stone cases were completely canceled after counseling. Patients with already double J in place and risk of encrustation exchange, were rescheduled for double j exchange under local anesthesia. The same policy was followed for all patients with BPH, cases requiring anti-incontinence and pelvic prolapse surgery. Prostate biopsy was performed only in cases with high PSA and risk for metastatic disease. The number of elective operations was dropped down by 53%, 65%, and 43% in March, April, and May 2020 respectively in comparison with the same months in 2019. The most affected month during the acute COVID period was April 2020. 65% of the cases performed in March and April 2020 were for urological cancer. Our surgical list had a waiting time of 6-8 weeks before the pandemic and now the waiting time has expanded to 12 weeks. The cases performed from May since mid-April were not screened for COVID-19 and fortunately, we did not have adverse events in our department. Since then, the policy has changed, and we follow the pathway presented in **Figure 1**. In surgical emergency cases e.g. in a young patient with testicular torsion, we always take a nasopharyngeal and rhinopharyngeal swab for COVID-19 before we proceed to the operation. Acute urological visits were reduced in March, April, and May 2020 in comparison to 2019: The drop was 35%, 57% and 23% respectively. Acute urological admissions were reduced by 16%, 51%, and 10% respectively. There was a reduction of acute febrile urinary infections by 33%, 50%, and 14% respectively. Admissions for other diseases e.g. renal colic or hematuria were less affected. This drop was possible twofold: Measures applied by the Greek Government (quarantine and travel bans) and self-isolation due to fear of contamination from SARS-CoV-2 at the hospital, decreased human contacts, activities and hospital visits.

Outpatient clinics were completely cancelled on March and April and restarted on May only on their half of the usual capacity (8 booked cases three times per week). A major drawback for our hospital is that it has not adopted yet telecommunication technology to perform virtual visits via telecommunication or phone appointments. However, a small number of highly motivated patients who are already seen in our clinic mostly with prostate cancer or after transurethral surgery, were counseled personally by the physicians via email, mobile applications such as Viber and messenger or by phone. Patients already on maintenance bladder instillations for high-risk non-muscle-invasive bladder cancer had continued them. Treatment for new cases was deferred for 2-3 weeks. The schedule in the department of chemotherapy was extended from once to 3 times per week to avoid overcrowding. However, all received written instructions for social distancing and personal protective measures. Currently, we follow the GORRG guidelines and operate on intermediate-priority patients with a capacity of 75% as we are not now in COVID surge.2 Finally, our region has been largely unaffected by the pandemic with only seven cases of COVID-19 since the outbreak in the country. Also, our hospital during this pandemic is a “cold hospital”. COVID-19 patients who require admission are transferred to a referral hospital. There are advantages to this policy as it conserves personnel protective equipment and services for heavily affected areas of the country and allows the hospital to continue at least a minimum number of cases without interruption. The long-term implications of the reduction in urological services are currently unknown. This pandemic prevents many patients from accessing timely and necessary surgery resulting in unpredictable negative repercussions on their chances of being effectively treated.3 For exam-

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Received June 2020 & Accepted July 2020

Figure 1. Pathway for elective cases in era of COVID-19 in our department.

ple patients, with stent dwelling times more than one month who undergo ureteroscopy, have a higher chance of postoperative sepsis (4.9%-9.2%).4 Regarding outpatient visits we expect a demand for telehealth services in the future. Telehealth logistics should be developed and deployed promptly, including the necessary training, staffing, and workflow, all with minimal disruption or resistance.5-6 Special consideration should be given to the tradeoff of resource utilization between surgery and non-operative management.7 Surgical leaders should develop frameworks to help decision making for elective surgery as available information continues to evolve. Prevention, control, and countermeasures against the COVID-19 are also important in the urology department.3 It is obvious that healthcare providers should adopt a new healthcare model.

REFERENCES

1. World Health Organization. Novel coronavirus(2019-nCoV): situation report–70. www.who.int/docs/default-source/coronaviruse/situation-reports/20200330-sitrep-70-covid 19.pdf?sfvrsn=7e0fe3f8
2. Ribal J, Cornford P, Briganti A, et al. EAU Guidelines Office Rapid Reaction Group: an organization-wide collaborative effort to adapt the EAU guidelines recommendations to the COVID-19 era. Eur Urol. In press. https://doi.org/10.1016/j.eururo.2020.04.056
3. Naspro, R., Da Pozzo, L.F. Urology in the time of corona. Nat Rev Urol 17, 251–253 (2020). https://doi.org/10.1038/s41585-020-0312-1
4. Nevo A, Mano R, Baniel J, Lifshitz DA. Ureteric stent dwelling time: a risk factor for post-ureteroscopy sepsis. BJU Int. 2017;120(1):117-122. doi:10.1111/bju.13796
5. Andino J, Shah P, Roberts W, et al. UROLOGIC TELEHEALTH: SUBSTITUTION OR EXPANSION? j Urol.:203, No. 4S, Supplement, 2020, e17.
6. Bashshur R, Doarn CR, Frenk JM, Kvedar JC, Woolliscroft JO. Telemedicine and the COVID-19 Pandemic, Lessons for the Future. Telemed J E Health. 2020;26(5):571-573. doi:10.1089/tmj.2020.29040.
7. Diaz A, Sarac BA, Schoenbrunner AR, Janis JE, Pawlik TM. Elective surgery in the time of COVID-19. Am J Surg. 2020; S0002-9610(20)30218-X. doi: 10.1016/j.amjsurg.2020.04.014