Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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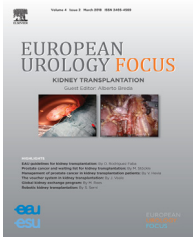

Letter to the Editor

Impact of COVID-19 on Urologists: Learning on the Go

The spread of the COVID-19 pandemic around the globe has prompted lots of actions to contain the crisis. This includes public health education, social distancing measures, restriction of air travel, and the implementation of curfew rules. Health care systems are facing enormous pressure to cope with the current burden of cases and to prepare for the anticipated surge in the number of patients [1].

Urologists are facing a unique unprecedented situation that involves applying the principles of disaster medicine to our patients for the first time at national and international levels. One of the main dilemmas in this situation is how to keep patients safe while reducing elective work to a minimum, as well as protecting oneself and other staff members. COVID-19 is presenting health care systems with challenges that have a limited evidence base to guide us through the surge of the pandemic to manage patients safely [2].

International and national urological societies such as the American Urological Association (AUA) [3] and the British Association of Urological Surgeons (BAUS) [4] have been publishing guidelines and protocols on how to triage patients during this time of uncertainty and how to outline service provision that will need to deviate from the internationally accepted standard of care during the COVID-19 pandemic.

As the situation evolves, protocols and recommendations are continuously monitored and updated. This article highlights current examples of how urologists are "learning on the go" during this pandemic crisis.

1. BAUS COVID-19 strategy for urothelial carcinoma

BAUS guidance [4] on the management of bladder cancer patients during the COVID-19 pandemic was first published on March 19, 2020. This included two steps: (1) the response to reduced service provision, and (2) the response to severely reduced service provision.

1.1. Intravesical bacillus Calmette-Guérin

Version 1 of the BAUS guidance recommended against intravesical instillation (bacillus Calmette-Guérin [BCG] or chemotherapy) for non–muscle-invasive bladder cancer because of potential immunosuppressive effects. For patients who had already started BCG treatment, the recommendation was to complete the induction course, if possible, then defer further treatment.

On March 31, 2020, BAUS released version 2 of the guidance with an update recommending consideration of the risk/benefit ratio of giving or continuing intravesical instillations (BCG or chemotherapy) for non–muscle-invasive bladder cancer.

1.2. Upper tract urothelial carcinoma

There was no recommendation for upper tract urothelial carcinoma in version 1 of the BAUS guidance, but this was added in version 2, as shown in Table 1.

2. Urolithiasis

No guidelines specific to the management of urolithiasis during the COVID-19 pandemic have been published by any international or national urological association at the time of writing. Proietti et al [5] have proposed a simplified protocol for triaging patients with urinary stones during the pandemic. The authors recommend a conservative approach in managing cases of renal colic to avoid in-hospital admissions. They also recommend insertion of ureteric stents and nephrostomy tubes under local anaesthetic, if possible, to spare a ventilator. Their protocol includes a telephone consultation to screen patients for history and/or symptoms suggestive of COVID-19. Any patient with suspected or confirmed COVID-19 requiring urgent endourological intervention would be managed in a dedicated operating room. The authors suggest a priority assessment for patients scheduled for stone surgical intervention that is based on several parameters: stone size and location; obstructive uropathy; symptom control; presence of an indwelling ureteric stent or nephrostomy tube; and other related factors such as a solitary kidney or impaired renal function. On the basis of their model, surgery for a patient with a unilateral nonobstructing renal stone and normal renal function can be postponed, whereas cases with a solitary kidney or obstructing ureteric stones should be prioritised. Patients with urinary stones represent a wide spectrum of different case scenarios that need a judicious clinical decision to prioritise management.

Pradère et al [6] addressed the safety of nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen in urological practice in light of some recent reports raising concerns about

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Table 1 – British Association of Urological Surgeons guidance on upper tract urothelial carcinoma.

Clinical scenario	Reduced service	Severely reduced service
Suspicion of upper tract TCC	Only CT urogram	CT urogram if significant haematuria
	Avoid ureteroscopy	
New ureteric or renal pelvis tumour	Nephroureterectomy if active haematuria or suspicion of high-grade/stage disease and good performance status	Defer
		Consider embolisation if significant haematuria

TCC = transitional cell carcinoma; CT = computed tomography.

whether NSAIDs worsens COVID-19 symptoms. They concluded that NSAIDs are the most efficient treatment for renal colic and are still indicated and should be maintained. NSAIDs should only be avoided in the case of doubt for a symptomatic viral infection with fever, for which paracetamol (acetaminophen) should be prescribed instead.

3. Urological laparoscopy and robotic surgery

Publications to date by different societies and associations highlight the challenges involved in urological laparoscopy and robotic surgery but do not conclude that they should be discontinued. The BAUS COVID-19 strategy for laparoscopic/robotic surgery published on March 30, 2020 [4] noted the arguments circulating about the safety of laparoscopic surgery in the COVID-19 era and concluded that there is currently insufficient evidence to either recommend or prohibit the use of laparoscopy. Caution is required in making decisions on whether to operate in all urgent but nonemergency cases. Aerosolisation, which can occur in all types of surgery, carries a theoretical risk to staff. Laparoscopic surgery is potentially an aerosol-generating procedure (like electrocautery of any blood/tissue/fluid). The BAUS recommendation is to wear full personal protective equipment with FFP2/3 masks and visors when operating on a COVID-positive or COVID-suspected patient. In addition, minimising operating time, maximising patient safety, and promoting expedited patient recovery are key considerations to weigh against the possible risk of viral aerosolisation. Minimisation of chest complications (atelectasis/pneumonia) may be very important in reducing the overall risk to the patient from surgery [4].

The American College of Surgeons concluded that there are insufficient data to recommend for or against an open versus laparoscopic approach; however, the surgical team should choose an approach that minimises time and maximises safety for both patient and health care staff [7]. The European Association of Urology (EAU) Robotic Urology Section emphasises the use of preoperative testing for Covid19 and postponement of surgery, if at all possible [8].

By contrast, the Royal College of Surgeons (RCS) has stated that laparoscopy should generally not be used as it risks aerosol formation and infection [9]. Chinese and Italian experience reflects this. The safety mechanisms advocated (filters, traps, careful deflation) are difficult to implement. The RCS advises that laparoscopy should only be considered in extremely selected cases for which the mortality benefit is substantially beyond doubt in the current situation.

4. Telemedicine

Telemedicine has gained newfound relevance in helping to alleviate pressure on health care systems. The COVID-19 pandemic has highlighted the importance of telehealth as a means of reducing the risk of cross-contamination caused by close contact in the delivery of care.

A key factor in slowing the transmission of a virus is “social distancing” [1], which decreases person-to-person contact. For patients with COVID-19 and those concerned that they might be infected, telehealth can help with remote assessment (triage) and the provision of care. For individuals not infected with COVID-19, especially those at higher risk of being affected (eg, older adults with preexisting medical conditions), telehealth can provide convenient access to routine care without the risk of exposure in a congested hospital or in medical practice waiting rooms [10].

Since telemedicine is not included as a standard part of medical training, urologists may struggle initially to adapt to this novel approach. Nevertheless, the current situation is imposing a shift to telemedicine in its simplest forms. Urologists are currently learning how to manage patients through virtual/telephone clinics and how to hold multidisciplinary team meetings via video conferencing.

Medical education also provides relevant examples of “learning on the job” from a telemedicine perspective. The EAU 2020 congress was initially postponed from March to July 2020. Later, a final decision was taken to cancel the physical meeting and to instead hold virtual interactive online sessions to spread knowledge while maintaining the safety of attendees [11].

It is expected that when the COVID-19 pandemic is over, telemedicine will gain increasing popularity and support as it has proven to be beneficial and efficient in the current situation. Health care systems should consider more widespread adoption of telemedicine tools not only in emergency crises but also in daily practice.

5. Research work

There is an urgent need to understand outcomes for COVID-19 patients who undergo surgery. Capturing real-world data

and sharing international experience will improve the management of this complex group of patients who undergo surgery throughout the COVID-19 pandemic and optimise their clinical care.

CovidSurg is a research project designed by an international collaboration of surgeons and anaesthetists with representation from Canada, China, Germany, Hong Kong, Italy, Korea, Singapore, Spain, the UK, and the USA [12]. CovidSurg will be a platform of studies exploring the impact of COVID-19 on surgical patients and services that includes the following studies:

- CovidSurg: an international cohort study assessing the outcomes of surgery in patients diagnosed with COVID-19;
- CovidSurg-Cancer: an international cohort study assessing the safety of surgery for all types of cancer during the COVID-19 pandemic and the impact of the pandemic on cancer delay and treatment pathways;
- CovidSurg Resource Survey: a survey assessing the influence of the COVID-19 pandemic on surgical services, particularly elective surgery cancellation and emergency surgery management; and
- CovidSurg Workforce Survey: a survey to determine the impact of COVID-19 on surgical workforce sickness, protection and task management.

Research and publications during the pandemic crisis continue to be an essential pillar for both current and future learning so that we can provide the best care possible for our patients.

6. Conclusions

The COVID-19 pandemic has presented health care systems with challenges for which limited scientific evidence exists. Pragmatic management is needed to cope with the pressure to reduce all elective work and to find suitable alternatives to maintain a minimum level of service provision at times of pandemic surge. Since the global situation is rapidly evolving and proposed guidance protocols are being updated, urologists are currently "learning on the go" to be able to make judicious clinical decisions in the middle of the current pandemic crisis.

Conflicts of interest: The author has nothing to disclose.

References

[1] World Health Organization. Coronavirus disease (COVID-19) pandemic. www.who.int/emergencies/diseases/novel-coronavirus-2019.
[2] Paganini M, Conti A, Weinstein E, et al. Translating COVID-19 pandemic surge theory to practice in the emergency department: how to expand structure. Disaster Med Public Health Prep 2020;27:1–10. http://dx.doi.org/10.1017/dmp.2020.57.
[3] American Urological Association. Coronavirus disease 2019: AUA information center. www.auanet.org/covid-19-info-center/.
[4] British Association of Urological Surgeons. About coronavirus & COVID-19. www.baus.org.uk/about/coronavirus_covid-19.aspx.
[5] Proietti S, Gaboardi F, Giusti G. Endourological stone management in the era of the COVID-19. Eur Urol. In press.
[6] Pradère B, Ploussard G, Catto JWF, Rouprêt M, Misrai V. The use of nonsteroidal anti-inflammatory drugs in urological practice in the COVID-19 era: is "safe better than sorry"? Eur Urol. In press.
[7] American College of Surgeons. COVID-19: elective case triage guidelines for surgical care. www.facs.org/covid-19/clinical-guidance/elective-case.
[8] European Association of Urology. EAU Robotic Urology Section (ERUS) guidelines during COVID-19 emergency. https://uroweb.org/eau-robotic-urology-section-erus-guidelines-during-covid-19-emergency/.
[9] Royal College of Surgeons. Updated intercollegiate general surgery guidance on COVID-19. https://www.rcseng.ac.uk/coronavirus/joint-guidance-for-surgeons-v2/.
[10] Smith AC, Thomas E, Snoswell CL, et al. Telehealth for global emergencies: implications for coronavirus disease 2019 (COVID-19). J Telemed Telecare. In press. https://doi.org/10.1177/1357633X20916567.
[11] European Association of Urology. Update: EAU20 to go virtual this coming summer. https://eaucongress.uroweb.org/novel-coronavirus-and-the-congress/.
[12] NIHR Global Health Research Unit on Global Surgery. About CovidSurg. https://globalsurg.org/covidsurg/.

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