COVID-19 and urology

Adapt, Delay (Where Possible) and Recover

Since COVID-19 first appeared around 12 months ago, the need to divert healthcare resources to care for those people infected with the virus has resulted in enormous changes in the way that the care of other patients, including those with urological disease, is delivered. This has often been associated with delays in treatment, with increased waiting lists for non-urgent procedures and with the need to develop plans to recover surgical services.

At the time of writing, much of the developed world is experiencing a second wave of the COVID-19 pandemic. The combination of winter weather in the northern hemisphere, combined with mutant strains with increased transmissibility in both the UK and in South Africa has resulted in pressure on healthcare services that is at least as great as during the first wave. At the same time, the development of apparently effective vaccines raises the possibility that in the relatively near future, life in general and healthcare delivery in particular might return to something more like normal. In the context of the second wave there remains a need to adapt services, to delay treatment for those in whom it is safe to do so and to begin to plan for recovery.

Urological Services and COVID-19

A MEDLINE search of publications in 2020, combining the search terms “urology” or “urological surgery” with “COVID-19” reveals the extent to which the specialty has responded to this challenge. There have been over 270 published articles, with 56% of publications concentrating upon the impact of the disease on urological services, the development of triage pathways and the development of guidelines for the treatment of patients in the context of reduced resources. Of the remaining articles, 14% focused upon the role of telemedicine and information technology, 15% have described the training and educational consequences for our trainees while 8% have addressed the potential risks of COVID-19 for both urological surgeons and their patients. The final 7% deal with a range of other topics including descriptions of the disease itself and its relationship to both androgens and to BCG.

Case Prioritisation

In the context of urology, triage should prioritise those cases that we deem to be at greatest risk of harm if they do not receive timely treatment. This has been led by our professional organisations, which have developed guidelines, based upon evidence and supplemented by expert opinion where appropriate, such that there have been a plethora of such guidelines published over the past 12 months, albeit with a large degree of agreement and overlap.

Additional information:

“Amparore D, Campi R, Checcucci E et al. Forecasting the Future of Urology Practice: A Comprehensive Review of the Recommendations by International and European Associations on Priority Procedures During the COVID-19 Pandemic. Eur Urol Focus 2020; 6: 1032–48.”

"The challenge is to understand the pros and cons of these different approaches to prioritisation”

One challenge is that urology has to "compete" for resource with other specialties and as a consequence some of the guidelines have been cross-specialty. This approach is particularly attractive for healthcare systems that are therefore able to potentially develop resource allocation plans. At the same time, clinicians, understanding the circumstances of individual patients will
also have opinions on prioritisation, although there is inevitably a risk of both conscious and unconscious bias in those judgements. A recent publication has demonstrated, in a urological context, that these different ways of prioritising patients do you not always lead to the same answer. As we move forward, the challenge is to understand the pros and cons of these different approaches to prioritisation, and to integrate them appropriately.

Consequences of Delayed Treatment

During the COVID-19 pandemic, at least during the first wave, there was a reduction in other healthcare activity resulting in treatment delay. For instance, in England, the referrals of new patients with symptoms suggestive of urological cancer fell from 18 534 in February 2020 to 7859 in April 2020 (a 58% reduction) and had not recovered to pre-pandemic levels by October.

Furthermore, this so-called “presentation delay” in referral has been compounded by further “diagnostic delays” in a healthcare system that was already under pressure from COVID-19 with stretched diagnostic resources.

Many urologists will have an intuitive view as to the potential consequences of delaying the treatment in an individual patient. For urologists, a delay in the treatment of the urological cancers is one of the more pertinent areas and there are a number of reviews in the literature regarding the current state of the evidence in this respect. However, the situation is more complicated, given that older patients with cancer are more likely to die from COVID-19, should they develop it.

Two recent publications have attempted to quantify the consequences of delay in the diagnosis and treatment of cancer during the pandemic [5,6] with one describing the development of an online resource for clinicians that can individualise the risks based upon age, cancer type, cancer stage, comorbidities and the local prevalence of COVID-19 [6].

The former paper modelled the 20 most common cancer types and sought to quantify the effects of varying durations of diagnostic and treatment delay upon survival and it makes interesting reading from a urological perspective, since prostate, bladder, kidney and testis cancer were all included. The modelling showed that for several cancers, including bladder cancer, a 3-month delay to diagnosis resulted in a reduction in 10-year survival of at least 10% in most age groups, while for kidney cancer similar reductions in survival were seen in older age groups. For prostate and testis cancers, a delay of 3 months had hardly any effect on 10-year survival, likely reflecting the large numbers of indolent prostate cancers and the high cure rates in men with testis cancer.

The authors then sought to model the risk–benefit balance for an individual with possible cancer-related symptoms regarding referral for investigation in the context of the pandemic. Broadly speaking, for those under the age of 60 years, provided nosocomial infection rates are less than 2.5%, the risk of a 2-month delay in reaching a diagnosis exceeded investigation related fatality. However, in patients over the age of 70 years, when the nosocomial infection rate is greater than 1%, investigation related fatality for several tumour types with a good prognosis, (including prostate) was predicted to be greater than delay-related cancer fatality, even for delays of up to 6 months.

Recovery of Services

The first COVID-19 wave resulted in an enormous increase in surgical waiting lists that had barely been addressed before the 2nd wave arrived.

The first COVID-19 wave resulted in an enormous increase in surgical waiting lists that had barely been addressed before the 2nd wave arrived. A recent publication suggests that over 3 million urological operations were cancelled globally during the peak 12 weeks of the 1st wave with over 80% being operations for benign disease. It was suggested that even if all countries increased surgical capacity to 20% greater than it was prior to the pandemic, it would take around 45 weeks to clear the backlog.
other conditions despite the pandemic, so that these alarming statistics deteriorate as little as possible. To that end there have been a number of documents published online that are designed to plan for the recovery of surgical services [8,9]. We can only hope that the advent of effective vaccines will allow these plans to come to fruition.

https://www.rcseng.ac.uk/coronavirus/recovery-of-surgical-services/
https://gettingitrightfirsttime.co.uk/wp-content/uploads/2017/07/A-framework-for-reestablishing-and-developing-urology-services-v1.0-4-Sept-2020.pdf

A Resident’s Tale
Many urologists have been and will be redeployed to provide care for patients with COVID-19. Although frontline medical staff will be amongst the first to be vaccinated in most countries, many will still be fearful of the disease itself and of their ability to manage medical problems outside their own comfort zone. Any doctor faced with reassignment in the near future would do well to read a short article written by a Urology resident in New York who was moved to care for COVID-19 patients during the first wave. She concluded that her re-deployment was “...an unforgettable experience that called on the key skills that all physicians require, namely adaptability, application of translational medicine and quick absorption of new information”. Her fears, anxieties and tips for survival are well worth a read and remind us that in the end, we are all doctors.

Davuluri M. Urology Chief Resident Turned Medicine Intern: Experience during the COVID-19 New York City Pandemic. J Urol 2020; 204: 638–9.

World News is written by Ian Eardley