



Intravesical therapy for bladder cancer in the pandemic of Covid-19

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Dear Editor,

On 31st December 2019, the World Health Organization (WHO) was informed of cases of pneumonia of unknown etiology detected in Wuhan City, Hubei Province of China. The culprit of the infection was found to be a coronavirus, SARS-CoV-2, and the disease was formally named Covid-19. Unfortunately, Covid-19 has spread to more than 200 countries worldwide, and the WHO has officially announced it a pandemic on 11th March 2020 [1].

The exponential increase in the number of Covid-19 cases is accompanied by fear and panic among health care professionals and the general population. Social distancing is recommended to avoid the clustering of people and minimizing the chance of viral transmission; however, this may not be possible for patients who require cancer-related treatments in hospitals.

In patients with non-muscle-invasive bladder cancer (NMIBC), the use of adjuvant intravesical therapy, either in the form chemotherapy or BCG instillations, has been advocated to optimize disease control. However, it requires repeated hospital visits which may not be ideal in the current pandemic of Covid-19. The mortality rate of Covid-19 increases significantly with age, ranging from 0.32% in the 20–49-year age group to 14.8% in the ≥ 80 -year age group [2]. Bladder cancer tends to occur in chronic smokers with a median age of over 70 years [3], and they are also prone to developing severe sequelae if they happen to contract Covid-19. This raises a question on whether we should continue, postpone, or terminate intravesical therapy for NMIBC patients. Polling questions were posted via the #UroSoMe platform [4], but they did not yield any dominant preferences from the audience possibly due to varying resource availability and changing pandemic situation.

For intravesical chemotherapy, repeated instillations have been shown to improve recurrence rate in intermediate-risk NMIBC. The regimens vary across different centers in terms of number of instillations and duration of treatment course. In a meta-analysis by Sylvester et al. [5], a short intensive schedule within the first 3–4 months versus a longer term (1-year course) but less intensive treatment schedule appears to be equally effective. The results imply that it may be oncologically safe to space out the intravesical chemotherapy instillations, as soon as a longer duration of treatment is planned to be given. However, patients still have to go to the hospital despite a less frequent instillation schedule; the risk of Covid-19 infection must be weighed against the benefit of 38% reduction in 1-year recurrence rate [6]. Patients who do not opt for intravesical chemotherapy can be followed up with surveillance cystoscopy.

For intravesical BCG therapy, induction course requires 6-weekly instillations, followed by 1–3 years of maintenance course for intermediate- to high-risk NMIBC [7]. Four-to-six weekly instillations are required to achieve a maximum immune-response level which is the rationale behind the induction regimen [8]. At least 1 year of maintenance BCG is required to demonstrate superiority over mitomycin C [9].

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For patients with high-risk NMIBC, we believe that the benefit of continuing BCG for a better cancer control outweighs the potential risk of Covid-19 infection along the treatment course. To minimize the number of hospital visits, having at least four out of six doses of induction course, and two out of three doses of maintenance course should be considered acceptable. High-risk NMIBC patients who have on-going intravesical BCG therapy for more than 1 year can be safely terminated. For patients with intermediate-risk NMIBC, given the lower risks of disease recurrence and progression, we should consider whether it is still worthwhile to proceed to BCG therapy during this critical time period of Covid-19 pandemic. We can discuss about the option of postponing BCG therapy, but we should emphasize the lack of oncological data in this approach. In countries where there is shortage of BCG, alternative treatments such as device-assisted intravesical chemotherapy can be considered. Countries with whole population BCG vaccination appeared to have a lower incidence and death rate from Covid-19; whether exposure to intravesical BCG has any protective effect towards Covid-19 remains to be explored [10].

Avoiding exposure is crucial in preventing Covid-19 infection; however, this may not be possible, especially for patients with high-risk NMIBC. To minimize the risk of Covid-19 infection, patients and health care professionals must be reminded to practice stringent hygienic measures including masking wearing and frequent hand washing in the hospital. Intravesical instillations should be given in single rooms as far as possible; otherwise, adequate distance between patient beds must be ensured. Health care professional should wear personal protective equipment while delivering intravesical therapy.

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