


STONES

# After COVID-19: planning postpandemic care of patients with kidney stones

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COVID-19 has had a substantial effect on patients with kidney stones, such as delays in care and increased anxiety and use of opioids. Mitigating these effects in the future could involve an online physician-based discussion as a part of the overall treatment strategy to help patients with their queries, apprehensions and ultimately their decision-making.

Refers to Jiang, T. et al. Impact of the COVID-19 pandemic on patient preferences and decision making for symptomatic urolithiasis. *J. Endourol.* <https://doi.org/10.1089/end.2020.1141> (2021).

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room visits and an increased proportion of patients had acute kidney injury, outpatient clinic visits were considerably delayed and a shift towards virtual or telephone clinics occurred<sup>5</sup>. The effect of these changes is anticipated to lead to a substantial backlog in treatment owing to shortages of in-hospital beds, anaesthetic or procedural slots and health-care staff.

‘Necessity is the mother of invention’, and patient prioritization and innovative thinking will be needed to deal with the aftermath of the COVID-19 pandemic. The pandemic has given us a chance to adapt to forthcoming challenges and the opportunity to improve urological pathways and streamline patient journey. A practice shift has already occurred in the placement of postprocedure ureteral stents, with urologists either not leaving a stent at all (12–66%) or leaving one with a string (7–16%), neither of which requires a subsequent removal procedure<sup>5</sup>. Similarly, the use of telemedicine and virtual stone clinics has provided a safe and cost-effective solution to the inability to see patients in person and patient compliance with these options is high<sup>6</sup>. Ureteroscopy in selected patients with ureteric stones could be performed under local or spinal anaesthesia, thereby avoiding aerosol-generating general anaesthesia, with percutaneous nephrolithotomy undertaken as a day-case procedure to facilitate early discharge<sup>7,8</sup>. Furthermore, the use of complementary therapy, such as music, could help reduce anxiety and the use of opiates during shockwave lithotripsy<sup>9</sup>.

Jiang et al.<sup>1</sup> demonstrated that patients showed safety concerns, mental health issues and reluctance to seek early help, but the authors also showed the growing influence of artificial intelligence (AI) in the field of endourology by using NLP, which shows the ability of a computer to comprehend the written and spoken language<sup>1</sup>. AI has now been used in analysis, treatment and monitoring of patients with kidney stone disease and identification of stone size and composition can predict endourological outcomes and will potentially improve shared decision-making

The COVID-19 pandemic has resulted in unprecedented health-care challenges, causing turmoil to routine patient needs in general and, particularly, how they approach symptomatic kidney stones<sup>1</sup>. Measures implemented to curb the spread of SARS-CoV-2, ranging from social distancing to complete lockdown, meant that cancellations of outpatient and routine elective work occurred, leading to disruptions in patient care and treatment pathways — the repercussions of which will be felt for a long time to come<sup>2</sup>.

During this time of uncertainty, patients with symptomatic kidney stones took to social media platforms to share their thoughts and understanding of their disease, perhaps to get help and support to allay their anxiety and suffering<sup>3</sup>. In a recent paper, Jiang et al.<sup>1</sup> looked at the Reddit forum r/KidneyStones, which is dedicated to urolithiasis and has >4,000 active members, and used natural language processing (NLP) to assess the discussion forum. Posts to the forum pre-COVID-19 (January and February 2020) and post-COVID-19 (March 2020 to 1 June 2020) were evaluated via classic qualitative thematic analysis, NLP-based linguistic inquiry and word count, and manual mining. After extracting 649 posts, a random selection of 150 from each period was selected. During the pandemic, patients turned to the forum to learn more about

kidney stone disease, seek advice, and share their own experience and adverse effects of treatment, concerns and anxiety about kidney stone disease, home-based remedies and difficulties in decision-making; noticeably, a more negative and anxious tone in their discussions was observed than prepandemic. Moreover, the proportion of mentions of the term ‘emergency room’ increased, whilst the term ‘urologists’ decreased; also, use of the terms ‘observation’ and ‘medical expulsive therapy (MET)’ rose and ‘operative surgical interventions’ fell.

Most urological guidelines suggested short-term modifications in their strategies for managing kidney stone disease during the COVID-19 pandemic, with possible deferral of definitive stone procedures and acceptance of increased indwelling stent time<sup>4</sup>. However, infected obstructed kidneys would still need urgent decompression, with the preferred choice of treatment being a ureteric stent or percutaneous nephrostomy under a local anaesthetic. This change in approach was noticeable in the discussion forum, in which the number of discussants preferring non-invasive treatment for stones  $\geq 10$  mm doubled, and mentions of opioids, preference of at-home management and anxieties about surgical access and infection tripled<sup>1</sup>.


In the USA and elsewhere, the effect of COVID-19 led to a reduction in emergency

by providing increased personalization of patient care<sup>10</sup>. AI has also been used in other areas of urology, such as prostate cancer and renal cancer, urogynaecology, paediatric urology and benign prostatic hyperplasia. It seems likely that embracing technology will enable the integration of social media platforms, AI and telemedicine in the future to improve and enhance communication with patients.

In the future, patients not coming to harm and normal services resuming is paramount to ensure that they feel supported in terms of their anxiety and physical well-being. The long-term effect of increased and sustained opioid use can cause opioid dependence resulting in social, psychological and physical health disorders, leading to death in severe circumstances. One strategy could be to implement online physician-based discussions as a part of the overall treatment paradigm to help patients with their queries, apprehensions and ultimately their decision-making. Similarly, in the aftermath of the pandemic, mental

health support for vulnerable patients will be necessary until the situation normalizes.

The repercussions of COVID-19 will be felt for a long time to come, but, no matter how hard the past is, you can always begin again, and so as endourologists we need to discover newer ways of working to mitigate the impact and harm caused by this pandemic. The opportunities that present themselves must be embraced to make the journey ahead a smooth one.

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#### Competing interests

The author declares no competing interests.