**COVID-19 and its impact on surgery**

Dr. Justin Kua

**Abstract**:

Over the last one and a half years, the coronavirus 2019 (COVID-19) pandemic has been the primary focus for healthcare services worldwide. Globally, COVID-19 has affected millions of people and over four million COVID-19-related deaths have been reported to the World Health Organization. It is increasingly likely that COVID-19 will become endemic; there has been a shift in focus from eradication of the disease to ensuring that sufficient proportions of the world’s population are vaccinated to reduce transmission and protect against severe manifestations of COVID-19.

In the United Kingdom, due to the need to divert resources to care for COVID-19 patients and prioritisation of emergency surgical cases over elective procedures, a significant backlog of surgical cases has built up. There is a need to tackle this surgical backlog which includes interventions to treat a variety of disabling orthopaedic conditions, such as those necessitating reconstructive or joint replacement surgery.

Acute infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; the virus causing COVID-19) during the perioperative period has been shown to increase the risks of post-operative mortality and pulmonary complications. Results from the GlobalSurg-CovidSurg Week multicentre study revealed that, over time, these post-operative risks decrease but remain significantly elevated until seven weeks and beyond following a diagnosis of COVID-19. Consequently, guidelines on the timing of surgery have recommended that patients testing positive for SARS-CoV-2 should have elective surgery delayed until beyond seven weeks, where clinically feasible.

In the context of COVID-19, much like other elective surgeries, multidisciplinary teams engaged in day case major knee surgery will broadly encounter three ‘types’ of patients: (1) those who have never had COVID-19 (and who are likely to have been vaccinated); (2) those who have acute COVID-19 infection; (3) those who have previously had COVID-19. Those who have never had COVID-19 and are vaccinated present the lowest risk for surgery and thus, should proceed accordingly. Based on existing evidence, those with acute COVID-19 infection present the highest risk and should be delayed. Finally, those with a previous history of COVID-19 infection should be assessed for the time since confirmation of their infection and any ongoing COVID-19 symptoms. Where possible, in these patients, surgery should be delayed until seven weeks after a positive SARS-CoV-2. Patients with ongoing COVID-19 symptoms should be considered for referral to a ‘long COVID’ clinic.

**Useful Resources**:

* COVIDSurg Collaborative, GlobalSurg Collaborative. Timing of surgery following SARS-CoV-2 infection: an international prospective cohort study. *Anaesthesia*. 2021 Jun;76(6):748-758.
* K El-Boghdadly, T M Cook, T Goodacre, J Kua, L Blake, S Denmark, S McNally, N Mercer, S R Moonesinghe, D J Summerton. SARS-CoV-2 infection, COVID-19 and timing of elective surgery: A multidisciplinary consensus statement on behalf of the Association of Anaesthetists, the Centre for Peri-operative Care, the Federation of Surgical Specialty Associations, the Royal College of Anaesthetists and the Royal College of Surgeons of England. *Anaesthesia*. 2021 Mar 18. doi: 10.1111/anae.15464.
* Preoperative Assessment and Optimisation for Adult Surgery including consideration of COVID-19 and its implications. June 2021. Available from: <https://www.cpoc.org.uk/preoperative-assessment-and-optimisation-adult-surgery>