Post-COVID elective surgery—‘to be or not to be’

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Published online: 19 April 2021

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The intrigue of Hamlet’s soliloquy—‘to be or not to be’, seems ever more relevant in contemporary ‘Corona times’. The metaphorical euphemism reverberates day-in and day-out in a surgeon’s mind, albeit as ‘to operate or not to operate’ when faced with a clinical scenario of a post-COVID (CORona VIRus Disease) patient needing an elective surgery. The Shakespearean hero’s ‘tragic flaw’ may, in case of matters at hand, literally translate into ‘to live or to die’. There is thus a compelling justification for sparing a deliberate thought on the pivotal question of timing of surgery in a post-COVID patient.

The issue seizes paramount acuity; as just when we thought that we were across the hill and that we had conquered the Corona pandemic, with much less collateral damage as compared to the rest of the world, we have been rudely shaken up by the sudden emergence of the second wave. At the time of my penning down this Editorial, the second wave seems to be much faster in its exposition than the first. Matters take all the more sinister outlook as there seems to be a general complacency in the laity and the COVID-appropriate behaviour is conspicuous by its absence. Even in hospitals, there is much less sensitisation and adherence to the basic tenets of prophylaxis, which served us well during the first wave. From an eerie and fearful calm of initial response to COVID-19 pandemic last year, we seem to have seamlessly retrogressed into the deathly dance of a hedonistic and debauched lifestyle, not discounting the frenzied euphoria of elections and mass protests. Everyone seems reassured—it cannot be me!

The second wave of COVID could not have been more inopportune in timing, as non-COVID work has picked up significantly and most hospitals are now reporting volumes of cardiac interventions and surgeries at nearly pre-COVID levels. A proportion of these patients are those who have suffered from COVID and are now presenting for elective cardiothoracic and vascular surgeries (CTVS). In these patients,

we are intuitively postponing surgeries until the tachycardia settles, both baseline and exertional oxygen saturations normalise and there is radiological clearance of lung shadows on computerised tomography (CT) scan of the chest. However, there is no objectivity to decision making, and surgery is being timed either empirically or based on low-level evidence from small observational studies.

A recent prospective, multicentre cohort study, carried out by the University of Birmingham in England, attempts to bring some granularity to this conundrum of the timing of elective surgery following a COVID infection [1]. In this study of 140,231 patients undergoing surgeries in October 2020 at various participating hospitals in 116 countries in the COVIDSurg Collaborative, 2.2% (*n*, 3127) had a preoperative Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) diagnosis established. Authors used logistic regression models to calculate adjusted 30-day mortality rates stratified according to the time-gap between the first diagnosis of infection to the actual performance of the surgery and found that 30-day mortality was a whopping 9.1% for patients whose surgeries were performed within 2 weeks of diagnosis of COVID. This mortality reduced sequentially, as surgery was taken remote from the diagnosis of COVID (6.9% for surgery performed between 3 and 4 weeks; 5.5% for surgery performed between 5 and 6 weeks and 2% for surgery performed seven or more weeks after the diagnosis of COVID.) In fact, at this time frame of 7 weeks, there was no statistically significant difference in 30-day mortality from patients without SARS-CoV-2 infection (1.5%). The study further found that if the patient remained symptomatic with COVID-19-related symptoms, then the elevated surgical risk continued even beyond 7 weeks (6% mortality), as compared to those where the symptoms had resolved (mortality 2.4%) or who had been asymptomatic (mortality 1.3%).

It would therefore logically behove us to postpone surgery in stable patients to at least 7 weeks after the diagnosis of COVID in asymptomatic patients and even longer for those with ongoing symptoms of long COVID. In a press release, the authors issue a caveat, ‘decisions regarding delaying surgery should be tailored for each patient, since the possible

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advantages of delaying surgery for at least 7 weeks following SARS-CoV-2 diagnosis must be balanced against the potential risks of delay', thereby suggesting that the decisions have to be personalised and customised to the acuity of the disease process, for which surgery is being contemplated.

Even though this paper does not address the speciality of CTVS specifically, the lessons can be extrapolated and are equally relevant to us. We may be served well by the dictum: when in doubt, just hold your horses!

Declarations

Informed consent Not required.

Conflict of interest The author declares no competing interests.

Reference

1. COVIDSurg Collaborative and GlobalSurg Collaborative. Timing of surgery following SARS-CoV-2 infection: an international prospective cohort study. *Anaesthesia*. 2021. <https://doi.org/10.1111/anae.15458>.

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