Timing of surgery following SARS-CoV-2 infection: an ever-changing landscape

Reports of excess mortality, pulmonary complications and thromboembolic events in patients undergoing surgery with a peri-operative diagnosis of SARS-CoV-2 prompted the surgical and anaesthetic communities to investigate when it is safe to proceed with surgery after recovery from infection [1]. Collaborative international multicentre prospective data demonstrated an excess mortality in patients undergoing surgery up to 7 weeks after a diagnosis of SARS-CoV-2 infection, prompting the recommendation that surgery should be delayed for at least 7 weeks after diagnosis, and possibly for longer in those with persistent symptoms [2]. While the rapid acquisition of data, formulation of guidelines and implementation of changes to clinical practice for patients undergoing surgery in the setting of a global pandemic have been nothing short of spectacular, we are now left with a major predicament because the current COVID-19 landscape has changed again. The limitations of early publications should also be acknowledged, including the potential misclassification of previously infected asymptomatic patients as being never infected.

Many countries have been fortunate to have widespread availability and uptake of vaccines, and we know that the vaccinated are less likely to have severe symptoms or require hospitalisation when compared with the unvaccinated [3]. At present, there is limited evidence regarding postoperative mortality rates in vaccinated patients with a peri-operative diagnosis of SARS-CoV-2 infection compared with those who are unvaccinated, and we lack evidence regarding mortality rates for vaccinated patients undergoing elective surgery in the weeks following a diagnosis of SARS-CoV-2 infection [4]. It is plausible that vaccination may offer some protection from the excess mortality associated with undergoing surgery in the 7 weeks after a diagnosis of SARS-CoV-2 given that it can mitigate the severity of acute infection. While the 7-week delay after diagnosis is disappointing and inconvenient for patients and clinicians, it can be overcome for the majority of patients awaiting elective surgery by rescheduling. There are, however, certain groups, such as oncology patients who have finished neoadjuvant chemoradiotherapy, who have a narrow window for surgery to take place that requires them to gain optimal benefit from pre-operative treatment. Data on mortality rates in vaccinated patients in the weeks following a diagnosis of SARS-CoV-2 compared with those without recent infection will need to be gathered to help us understand whether the 7-week delay can be shortened in vaccinated patients.

While there is no doubt that any variant of SARS-CoV-2 can cause serious illness and death, there are encouraging data emerging demonstrating that the risk of these outcomes with the omicron variant may be less compared with previous variants [Wolter et al., preprint, https://doi.org/10.1101/2021.12.21.21268116]. While this requires further confirmation, it does raise questions about the length of delay needed before surgery can be undertaken after infection with a potentially less virulent variant. Answering this question is particularly important as we are witnessing increased transmissibility of the omicron variant and, if the excess in mortality seen up to 7 weeks after surgery with previous variants no longer exists, it will facilitate hospitals to proceed with planned operating lists without constant delays and rearrangement of cases. It may also allow clinicians to proceed with time-dependent surgery with more confidence.

For now we continue to adhere to the 7-week delay after a diagnosis of SARS-CoV-2 wherever possible; however, the surgical and anaesthetic communities will again have to react to the major game changers in the setting of the virus. The role played by vaccines and novel variants should be studied over the coming months in order that we can continue to provide patients with safe and timely surgery. We eagerly await the data from the COVIDSurg-3 study that should clarify these issues.

I. S. Reynolds
St Vincent's University Hospital,
Dublin, Ireland
Email: reynoli@tcd.ie
É. J. Ryan
Tallaght University Hospital,
Dublin, Ireland
S. T. Martin
St Vincent's University Hospital,
Dublin, Ireland

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Management of haematoma after transoral endoscopic thyroidectomy via vestibular approach

We read with great interest the guidelines on the management of haematoma after thyroid surgery [1], and the authors are to be commended. A new technique for thyroid surgery, the transoral endoscopic thyroidectomy via vestibular approach (TOETVA), was reported for the first time in 2016 for selected patient groups [2, 3]. Compared with traditional open thyroidectomy, TOETVA does not result in any scarring of the neck. Other cited advantages include fewer wound infections, less postoperative pain and faster voice recovery. However, blood loss, incidence of hypoparathyroidism and injury to the recurrent laryngeal nerve are comparable with open thyroidectomy [3]. Intra-operative use of indocyanine green may assist in identifying the parathyroid glands and assess their viability and blood supply [3, 4]. A meta-analysis reported an overall surgical trauma-related complication rate of 2.91% (most commonly emphysema (n = 11), haematoma (n = 10) and seroma (n = 36)) [5], and although findings were limited by the relatively low number of patients included in the available studies (n = 1776), no fatality was reported. Because TOETVA uses an oral vestibular approach, the recommendations by Illif et al. regarding SCOOP (skin exposure; cut sutures; open skin; open muscles (superficial and deep layers); pack wound) cannot be applied 1:1 [1]. Specifically, regarding the 'open skin' recommendation, there are no skin sutures and so the intact skin has to be incised with a scalpel. Therefore, we have modified the proposed SCOOP approach [1], and offer an alternative for patients with a haematoma after TOETVA which requires urgent evacuation. We recommend marking the skin where the incision for haematoma evacuation should be performed with an indelible marker at the end of surgery. The exact location of the incision line is defined just above the field of the thyroid resection and the correct field marking should be controlled via direct endoscopic vision. The location of the incision line is approximately two finger widths cranially to the jugular notch. Next, the skin is covered with a cream containing local anaesthetic (e.g. EMLA, Aspen, Munich, Germany). A self-adhesive plastic foil covers cream and skin and is left in place until the patient is discharged. An emergency set with the algorithms provided by Illif et al. and this algorithm for TOETVA patients should be positioned next to the bed of the patient until they are discharged. If an emergency incision is required, we recommend the adapted SCOOP approach for TOETVA.

M. de Cillia
M. Grünbart
P. Paal
St. John of God Hospital, Paracelsus Medical University, Salzburg, Austria
Email: peter.paal@bbsalz.at

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