COVID-19 and jeopardy of a trainee in the era of minimally invasive surgery

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Abstract

COVID-19 pandemic had a global impact on residency training and surgical training had seen the worst hit. In the current era, the minimal invasive surgery has become inherent component of any surgical speciality training and the COVID-19 crisis has affected the various components of this training including acquisition of knowledge, clinical judgement and technical competency. This impact, coupled with uncertainty in future training and job opportunities have jeopardized the current surgical trainees.

Keywords: COVID-19, minimal invasive surgery, surgical residency, surgical training

As the COVID-19 pandemic affected health across the globe, the training of surgical residents has seen a major impact. With the evolution of endoscopy, laparoscopy and robotics, the minimally invasive surgery has become an inherent component of any surgical speciality training. This surgical training can be seen as an amalgamation of three key aspects, namely (i) surgical knowledge, (ii) clinical judgement and (iii) technical competency. With the risk of aerosol transmission and increasing scepticism in the safety of minimally invasive surgery, the COVID-19 pandemic affected all the three aspects of training.

KNOWLEDGE

Positive impact

There was a significant decrease in the working hours per week of a surgical resident. As per a study, the average working hours per week for a surgical resident decreased from 81.1 h (±6.2) per week to 49.1 h (±6.2) per week during this pandemic. The time for reading in surgical residency is often constrained, the decreased working hours provided a unique opportunity to spend more time in reading, particularly for a final-year resident. Apart from reading books, digital platforms and virtual classes involving seminars and journal clubs filled the gap for interactive learning. Thangasamy et al. reported the effectiveness of an online international journal club on a social media platform with the proportion of content-relevant tweets as high as 60%.

Negative impact

Although the decreased working hours might increase the time available for reading books, the duty hours became more strenuous with the use of personal protective equipment. Compounding this with the uncertainty in the examination process might not translate the extra available time into constructive reading.

CLINICAL JUDGEMENT

Positive impact

The ward postings of surgical residents in COVID wards provided them an opportunity to understand the concepts...
of infectious medicine, sepsis management and critical care.

**Negative impact**
With the suspension of ward-teaching grand rounds in most places, the surgical ward training of the residents suffered. This was particularly true for first-year surgical trainees, who learn mostly with the resident–resident interaction during the ward management. Virtual grand rounds and case discussions by the faculties would ensure uninterrupted learning.

**TECHNICAL COMPETENCY**

**Positive impact**
Although hands-on training and surgical exposure of residents decreased, the increased time of reading and use of web-based smart learning applications might have some positive impact.

**Negative impact**
Technical training in the field of minimally invasive surgery has suffered the worst. As per a survey of surgical residents in Italy, approximately 95% of the residents felt the negative impact of the COVID-19 pandemic on surgical training and 35% felt complete interruption of all surgical activities.[4]

Digital platforms and web-based technology have come with some relief in this aspect of surgical training. Virtual simulators could be utilised with the roster-based posting of residents. Besides simulator training, digital modes such as ‘video libraries’, ‘commentary on surgical procedures’ and ‘tips and tricks by experts’ appear useful in enhancing surgical training. The virtual learning platforms of Societe Internationale d’Urologie Academy and Surgery in Motion School of the European Urology Association are some exemplary platforms.

**EDUCATIONAL MILESTONES AND FUTURE TRAINING**

The qualifying examinations in various specialties have been postponed globally.[1] This had a demoralising impact on trainees, particularly in the field of minimally invasive surgery, which often involve fellowship courses. The delay in examination process associated with the new online format not only came as a sudden ‘new-normal’ examination pattern for the residents but also led to the reformatting of dates for various fellowships. Various international fellowship societies including the Endourological Society not only shifted their deadlines for fellowship match by a couple of weeks but also allowed provision of virtual interviews on digital platforms.

As we strive our way in these times of fear and uncertainty, a final-year resident is jeopardised with the issues of surgical competency, timely completion of the academic course and the future training/job opportunities. However, I still feel hopeful that, as humankind has always triumphed, this too shall pass. In the meantime, I just remembered the following lines of the British visionary and artist, Vivian Greene:

‘Life isn’t about waiting for the storm to pass………
………It’s about learning to dance in the rain’.

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