

The Impact of E-Learning in the Era of Covid 19 on Urology Resident Training

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Received: April 05, 2023

Published: July 12, 2023

Abstract

The residency training area was affected during the Covid19 pandemic. Thus, several guidelines have been taken to deal with the repercussions caused by this viral infection. The objective of the study is to analyze the impact of distance training by e-Learning during the Covid-19 pandemic in the department of urology and visceral surgery within CHU Hassan II of Fez. This descriptive study is based on an anonymous cross-sectional survey that included about thirty residents in urology and visceral surgery. The data collection was carried out by a survey based on an online form.

Keywords: Covid 19; Urology; Residency; Pandemic

Introduction

Multiple primary malignancies illustrate the existence of more than one primary tumor in different organs, or two or more primary tumors developed from different cell types, within the same organ. They are said to be synchronous when they are diagnosed less than 6 months apart [1,2]. Billroth 1889 first described this oncological entity, whose overall prevalence in urology varies between 4.2% and 8% [1].

The advent of new means of radiological diagnosis goes the same way with an increase in the detection of second primary cancers, thus underlining the interest of a surveillance strategy adapted to the particularities of this population at risk.

Materials and Methods

It is a descriptive cross-sectional study based on a collection of information through an online self-questionnaire from residents in urological surgery and visceral surgery at the University Hospital of Fez.

Target population: We have included all residents and specialists from both departments continuing their training for the 2020-2021 academic year at the Hassan II University Hospital in Fez during the first wave of the COVID 19 pandemic in Morocco.

a) Inclusion criteria: We included in our study medical residents (from 1st to 5th year) and specialists, from the two surgical departments, whether or not they had done COVID duty.

b) Exclusion criteria: Were excluded from our study new residents of the urology and visceral surgery departments whose term of office only began after the 2nd wave of the Covid 19 pandemic.

Results

Use of e-Learning :

The so-called "e-Learning" training is the use of new multimedia technologies of the Internet as well as new simulation technologies to improve the quality of learning by facilitating access to resources and services, on the other hand exchanges and remote collaboration

Total time dedicated to e-learning training per week:

53.3% of residents claim to have devoted less than 2 hours to e-learning training per week, 40% between 2 and 4 hours and finally 6.7% between 4 and 10 hours.

General assessment of the e-learning training:

Resident satisfaction with e-learning training: (Figure 1) 30% of residents seem very dissatisfied with e-learning training, 10% dissatisfied, 40% of them are indifferent, 16.7% are moderately satisfied and finally 3.3% are very satisfied.

Discussion

Factors related to residents' personal assessments of surgical training in the era of COVID-19 outside of E-Learning:

Individual training: In our study, residents claimed a reduction or even stagnation in their level of knowledge with a rate of 80%. COVID 19 has imposed fairly strict health measures which have impacted the training of residents by inducing a lack of supervision, practical training as well as the restriction of access to the operating room. Our results are similar to the study entitled "E-learning for the Continuity of Training in Ophthalmology during the COVID-19 Pandemic" in Tunis where the clinical activity would have been reduced by at least 50% for 90% of the respondents of the fact of the need for social distancing and the minimization of face-to-face training.

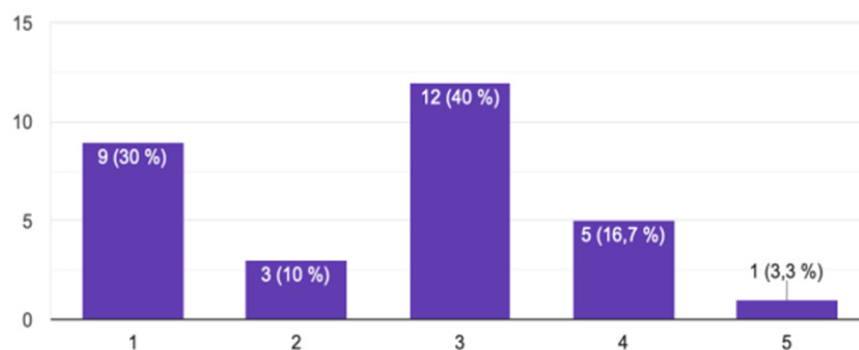


Figure 1: Distribution according to resident satisfaction with e-learning training.

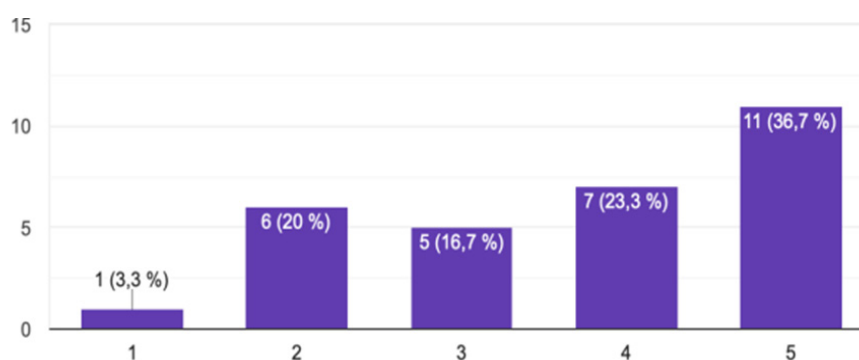


Figure 2: E-learning must be part of the axes of training in surgery.

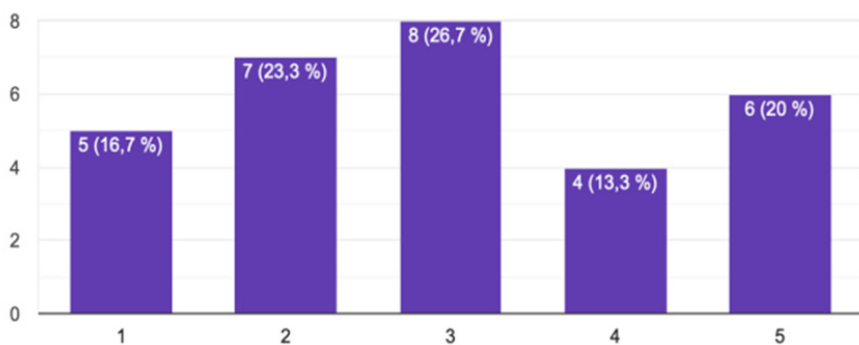


Figure 3: Breakdown of residents who recommend e-learning training platforms.

Use of e-Learning and its practical impact on residency training:

Distribution according to the connection material: In our series, the residents use more than one means of connection, more precisely; 73.7% use a smartphone, 63.3% a laptop and 20% a desktop computer or tablet; all in all, 100% of residents have a digital device to be able to access e-Learning training. Our results are similar to Yousra Falfoul's study in Tunis, where all residents had a computer at their disposal at home [2].

In addition, El Mendili's study shows that 90% of respondents had a computer mobile allowing them mobility and availability. This is explained by the choice of the population studied, of which the social level of some did not allow the purchase of a digital device.

Should e-Learning be part of the axes of training in surgery? In our study, 50% of residents consider that e-learning should be part of the axes of training in surgery, while the rest are not very convinced by this idea. Contrary to our study, the study of El Mendili, Yousra Falfoul and HansMichael Hau testify that

all of their participants recommend the use of training platforms by e-Learning and that these must be part of the axes of training in surgery.

Outlook:

Our cross-sectional study, conducted with residents, assessed the impact of e-Learning on residency training in the era of COVID-19.

While using an anonymous self-questionnaire, our survey was able to bring out interesting descriptive and analytical results. Nevertheless, the results of this work constitute the bases of a work to be continued and improved for a much more in-depth study.

Depending on the evolution of the pandemic as well as the appearance of new variants, the brakes on the generalization of the vaccine in developing countries, it is hoped to arrive at a basal level of infection with periodic peaks, which imposes the use of an adequate adaptation system that will allow the maintenance of continuous training adapted to the residents.

Citation: Chama O*, Bouchtib A, Ahsaini M, Mellas S, El Ammari J, Tazi MF, El Fassi MJ and Farih MH, Rawlins Jeremy and Ricciardo Peter. The Impact of E-Learning in the Era of Covid 19 on Urology Resident Training. *IJCMCR*. 2023; 28(1): 005

Admittedly, we found in our study that the individual training of residents in general has deteriorated, and this, due to several disadvantages, including: the lack of surgical supervision, practical training and access to the operating room. This has also been well described in the study by Hans-Michael Hau, Yousra Falfoul from Tunis and the study by El Mendili [3-5] In our study, all of the residents believe that the only advantage encountered during this period was the development of their theoretical knowledge.

For this, the use of training by "e-Learning" and the use of new multimedia technologies of the Internet as well as simulation technologies have been of essential help to improve the quality of learning by facilitating on the one hand access to resources and services, on the other hand exchanges and remote collaboration (university degree, etc.)

One could also consider, during a future study, carrying out a longitudinal and not a cross-sectional survey, which would make it possible to establish a causal link between the various factors studied and their impact, and to follow the evolution of the training of residents. throughout their residential course as the pandemic has taken part in our daily life and thus have more precise and concrete results.

Carrying out a similar study among doctors in the public and private sectors, and among paramedical personnel, could help us develop new practical and useful strategies for learning during pandemics, and therefore allow us to propose solutions. and more appropriate guidelines.

Conclusion

The COVID 19 pandemic still continues to spread through all countries of the world. It has generated considerable effects and significant degrees of anxiety and concern in the general population and particularly among residents of the Hassan II University Hospital in Fez. Our study constitutes a scientific continuity to previous studies, which aims to: Assess the impact of e-Learning on the training of residents in urology and visceral surgery in the era of COVID 19, to highlight the interest of e-Learning in the daily practices of future surgeons, and to determine their satisfaction with these new learning methods.

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