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Influence of Early Measures Against COVID-19 on Oral and Maxillofacial Surgery Training in Mongolia

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Objectives: This study aimed to evaluate the experiences of the oral maxillofacial surgery (OMFS) residents who worked as quarantine supervisors and its influence on their training.
Methods: An online survey was performed by the Department of Oral and Maxillofacial Surgery, School of Dentistry, Mongolian National University of Medical Sciences. All residents of the first and second years were invited to participate anonymously. The link to the survey was sent via e-mail.
Results: The duty and tasks mainly required little medical specialty, yet their knowledge and skill to respond to the medical emergencies were insufficient to supervise quarantined persons. The residents who were mobilized to work at the quarantine places missed certain clinical training opportunities.
Conclusion: Due to the measures against the Covid-19 pandemic, the oral and maxillofacial residents lost their opportunity to complete their full required rotations.
Keywords: Oral surgery, Education, Training, COVID-19, Quarantine

Introduction

In Mongolia, oral and maxillofacial surgery (OMFS) residency training takes two years. During the period residencies rotate five main hospitals located in the capital city: National Cancer Center, National Center for Maternal and Child Health, First General Hospital, Tugs-Yalguun Hospital, and the University-affiliated hospital. The residents spend an average of 3 months at each of the above-mentioned hospitals during their rotation period. In March 2020, the first COVID-19 case was confirmed and the government of Mongolia immediately closed its border [1,2]. Consequently, many Mongolians abroad were unable to return

home. The Mongolian government send a few repatriation flights to certain countries and prioritized families with children, elderly, and people with chronic medical conditions. The repatriated passengers were quarantined based on anecdotal evidence in hotels for 21 days under the supervision of physicians and the police [1]. Additionally, the city of Ulaanbaatar restricted the incoming and outgoing passengers from the neighboring provinces. Yet, there were not enough available physicians to work at quarantine locations and city border posts. The government mobilized residents from hospitals under the order of the Minister of Health (Number A/226). Oral and maxillofacial surgery residents were part of this mobilization along with other medical specialty residents. Residents who were mobilized during the pandemic missed their designated rotations. This study aimed to evaluate the experiences of the OMFS residents who worked as quarantine supervisors and its influence on their training.

Materials and Methods

An online survey was performed by the Department of Oral and Maxillofacial Surgery, School of Dentistry, Mongolian National University of Medical Sciences.

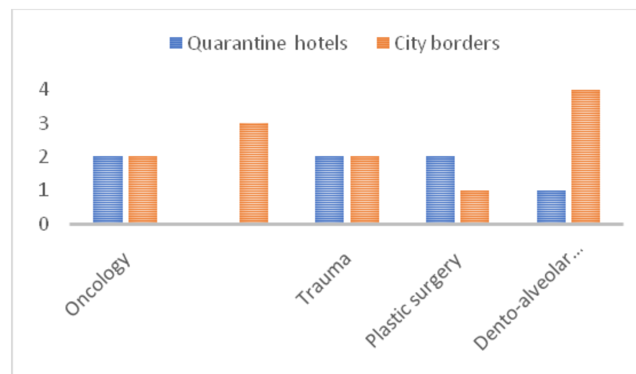

Figure 1. Graphical illustration of the missed rotations by number of residents.

Table 1. General characteristics of the survey responses

Characteristics		Residents worked at quarantine hotel n=6	Residents worked at border n=10
Gender	Female	4 (67%)	7 (70%)
	Male	2 (33%)	3 (30%)
Grade	1st year	1 (17%)	4 (40%)
	2nd year	5 (83%)	6 (60%)
Total mobilizations	1 time	2 (33%)	1 (10%)
	2 times	4 (67%)	6 (60%)
	3 times	0	3 (30%)
PPE instructions	No	0	2 (20%)
	Yes	6 (100%)	8 (80%)
PPE was enough	No	2 (33%)	8 (80%)
	Yes	4 (67%)	2 (20%)
Type of mask used	Surgical	4 (67%)	3 (30%)
	N95	0	4 (40%)
	Both	2 (33%)	2 (20%)
	Cloth	0	1 (10%)
Face shield	No	0	8 (80%)
	Yes	6 (100%)	2 (20%)
Was there positive person (COVID-19)	No	3 (50%)	10 (100%)
	Yes	3 (50%)	0
Instruction how to do nasal-pharyngeal test	No	6 (100%)	10 (100%)

	Yes	0	0
Satisfaction working on quarantine	Poor	3 (50%)	3 (30%)
	Fair	2 (33%)	5 (50%)
	Good	1 (17%)	2 (20%)

Thirty-nine questions were posed (open=14, closed=21, multiple choice=4), and 2 additional questions (open) to make more specific to clarify using Google Forms. All first- and second-year residents were invited to participate anonymously. The link to the survey was sent to their e-mail addresses in March 2022. The responses were collected and entered in IBM SPSS (26.0) for analysis using counts, percentages, cross-tabulations, and frequency reporting of the survey results.

Ethics

This study was approved by the Research Ethics Committee of Mongolian National University of Medical Sciences (23/3-01). Participants only enrolled voluntary based, and data cannot be traced back to individual respondents.

Results

Of the 37 OMF residents, 16 completed the survey. Eleven were female, and 11 were in their second-year residency during the mobilization (Table 1).

Availability of Personal Protection Equipment (PPE)

The residents used mainly surgical masks (n=7) followed by N95 respirator mask (n=4) or a combination of surgical masks plus N95 respirator masks (n=4). Cloth mask was used in one residency. The masks were changed on average 3 times a day IQR 3 (1; 4). A face shield was provided for half of the residences. Most of the residents responded that the provision of disposable gowns (n=14) was not enough and two were not supplied with disposable gowns (n=2). On average disposable gowns were changed 2 times a day IQR 3 (1; 4).

Working conditions and main duties

The main duties of residents who worked at quarantine hotels were checking the temperature of the quarantined persons 3 times a day, taking a questionnaire, and delivering food to the quarantined persons. Moreover, they did errands for the quarantined persons when their family members brought their items. Out of 6 residents who worked at hotels, 4 were harassed by at least one of the following: a hotel manager and a police officer, and persons who were quarantined. The main duties of the residents who worked at the city border were checking the body temperature, taking a questionnaire, and checking the ID of the passenger who wanted to enter or leave the city. The residents worked outdoors in very low temperatures (-25° Celsius). Four worked completely outdoors. Two had access to a toilet. Two residents reported that an emergency kit was not available and another two reported that no PPE was available.

Residents’ experiences and perceptions

During the mobilization, nine residents experienced medical emergencies. The emergencies were cardiovascular diseases (n=4), endocrinology (n=3), pulmonary disease (n=1), and a dental problem (n=1). Their skills and knowledge of how to respond to those emergencies were insufficient according to seven residents and sufficient according to two others. The residents reflected that the following skills and knowledge should have been provided prior to the mobilization; medical emergency certified program (n=8), the first aid guidelines (n=4), nasal-pharyngeal test (n=2), a reference book of pharmacology (n=1), waiter’s skills (n=1). Fifteen out of 16 residents missed their scheduled rotations due to the mobilization and were not reassigned to these missed rotations. Twelve of the residents responded that the mobilization harmed their professional training and education, three were neutral, and one responded encouraged regarding the mobilization. The residents’ missed rotation was shown in Figure 1. Of six residents who worked at the quarantine hotels four were mobilized twice and two once. The residents who worked at city borders missed their rotations for at least a week and were mobilized twice IQR 2 (2;3). Twelve out of 16 residents expressed their worries about not being able to graduate within the time frame and pass the clinical exams due to mobilization. Eleven residents responded that they were willing to attend a short-term clinical training on the missed rotations if their host hospitals organize a special.

Discussion

The initial policy and emergency response to the pandemic in Mongolia was successful in delaying an outbreak of COVID-19 [1,2]. However, unintended consequences occurred such as Mongolian travelling being trapped abroad, and suspensions of all levels of education were occurred [1]. The oral and maxillofacial surgery residency program in Mongolia takes 2 years and requires residents to rotate to several hospitals. But the residents who were mobilized to work at quarantine places missed at least one of the scheduled rotations. Most of them lost their opportunity to experience following surgical fields of oncology, and/ or traumatology, and/ or plastic surgery at a certain level. To strengthen the workforce to fight the pandemic, hospitals accepted new medical graduates, residents, and even medical students [3–5]. These mobilized medical staff worked at hospital settings to support first responders. However, the main duties of the residents were to bring breakfast, lunch, and dinner to the rooms of the quarantine persons at the hotel, or to check the temperature of the people traveling to neighboring provinces or the ones to enter Ulaanbaatar city following guidelines of infection prevention and protocol for control. In our opinion, these kinds of activities do not require a physician. Instead, non-medical people who had short-term training in the prevention of contamination would be sufficient. We understand that every quarantine place needs a physician to take care of quarantined persons, in case of emergency. However, the OMFS residents who had experienced medical emergencies during the mobilization had insufficient knowledge and skills to respond adequately. Working conditions were unpleasant for both groups of residents. Residents who worked at quarantine hotels worked indoors and had better facilities, but they received harassment from hotel managers, police officers, and quarantined persons. The residents who worked at city borders worked outdoors (-25C°), and the provided facility for them was small. Furthermore, more than 60% of the residents responded that PPE was not provided enough. The shortage of PPE was similarly reported in studies, however, therefore mainly N95 respirator masks particularly. Due to the pandemic the number of surgical experiences of the resident was relatively decreased in hospitals around the world [6–12], yet in general training programs take 4 to 6 years and there is time to compensate for their missed surgical experiences [13,14]. In Mongolia, OMFS training is relatively short compared with these countries, and each rotation takes on average 3 months. Therefore, missing one rotation or part of it is of considerable importance to the residents. Consequently, our department proposed a short-term special program for those who missed their rotation due to the mobilization. The majority of the mobilized residents responded that they would like to attend this program. According to the survey, most of the residents felt anxious about their clinical skills and graduation exam. Similar responses were reported in other studies [6,7,13,15,16].

The initial measures against the pandemic were effective in delaying an outbreak in Mongolia, however, it negatively affected the residents' training as an unintended consequence of the measures. For future mobilization in case of a similar situation, we should consider and plan ways to fully train our residents.

Conclusion

The residents in training must fulfill the designed curriculum and be able to provide a health service to the patients appropriately. However, because of the measures against the Covid-19 pandemic, the oral and maxillofacial residents lost their opportunity to complete their full required rotations.

Conflict of Interest

The authors state no conflict of interest.

Acknowledgment

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