



ENT Emergencies During the First Wave of the COVID-19 Pandemic at the Mohammed VI Hospital in Marrakech: Comparative Study Between Pre-and During COVID Pandemic in ENT Department

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Abstract

The rapid global spreading of SARS-CoV2 virus had triggered a state of alert in health systems imposing safety measures to limit its spreading. The aim of our study is to compare the number and type of emergency admissions in our university hospital between the first wave of COVID-19 pandemic and the same period of the previous year. A decrease in the number of patients and the nature of pathologies admitted to the emergency room during the COVID-19 pandemic. This study highlights that the Covid 19 epidemic and the containment have largely reduced the influx of patients treated in the ENT university emergency department of Marrakech, thus demonstrating that level 2 regional hospitals can take care of the majority of ENT emergencies and leave access to the level 3 university hospital to patients requiring heavy and multidisciplinary management.

Keywords ENT · COVID-19 first wave · Emergency · Comparative study

Introduction

The rapid and exponential global spread of patients with SARS-CoV2 or COVID-19 virus, has triggered a state of alert in health systems, imposing safety measures and adaptation to rapidly manage patients infected with COVID-19 virus, limiting its spreading and managing patients not infected but requiring urgent intervention.

The aim of our work is to study the epidemiology of patients admitted to ENT emergencies during the COVID-19 pandemic.

Methods

Our work is a retrospective descriptive study comparing patients admitted to the ENT emergency room at the Mohammed VI Hospital Center during the period of the COVID-19 pandemic between March 1ST and June 30th 2020 and patients admitted during the same period of the previous year between March and June 2019. Included are all patients who presented to the ENT emergency department during the COVID-19 pandemic period between March and June 2020 and between March and June 2019.

The data for our study were collected from the emergency room registers using a form.

Statistical study was conducted using SPSS 28, Comparing means using paired samples T-Test. the 95% confidence interval was used.

Results

In the studied population of 477 patients admitted to ENT emergencies during the COVID-19 pandemic period, 52% were male and 48% female, with ages ranging from 0 to 90

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Table 1 ENT and HNS Emergencies before and after the onset of the COVID-19 Out break

Pathology	Pre COVID-19 time*	Post COVID-19 time**	Percentage difference (%)	p
Foreign bodies	443	185	-58,2	<0.001
Stab wounds	85	39	-54,11	
Epistaxis	77	63	-18,18	
Facial palsy	60	23	-61,6	
Tumoral pathologies	9	14	55,5	
Cervical-facial suppuration	79	17	-78,48	
Cervical mass	62	41	-33,87	
Otological pathologies	37	31	-16,21	
Post traumatic pathologies	53	9	-83,01	
Dyspnea	25	10	-60	
Dysphagia	30	20	-33,33	
Vertigo	9	3	-66,66	
Others	21	8	-61,9	

*Pre COVID-19 time: from March 1st and June 30th 2019. **Post COVID-19 time: March 1st and June 30th 2020

Comparative graphic between the different pathologies encountered in Otolaryngology (ORL) Emergencies before and after the onset of the COVID-19 Out break

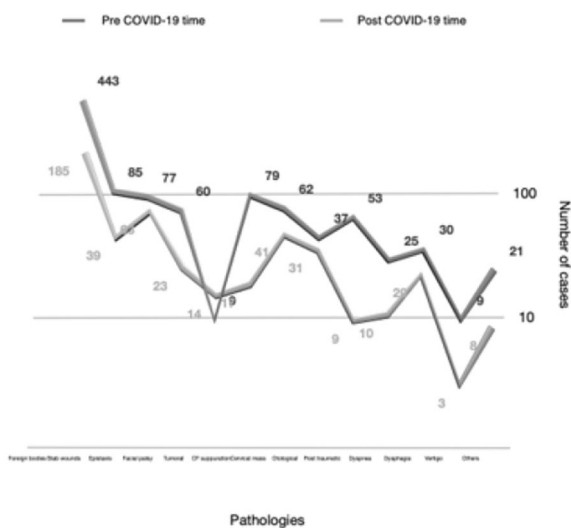


Fig. 1 Comparative graphic between admission in ENT emergency room per pathology during the two periods

years. The median age was 25.5 years, with the most predominant age range being between 2 and 15 years.

During the same period in 2019, 1092 patients were admitted to the ENT emergency room between March and June 2019, 54% of whom were male and 46% female, their age ranged from 0 to 87 years with a median age of 36 years with a predominant age range between 2 and 15 years.

There was a notable percentage decrease between all pathologies during the two periods, and this difference in number of admission per pathology was statistically significant ($p < 0.001$).

The most common pathology found during both periods was foreign bodies of the ENT sphere, representing 39% of all pathologies encountered in the emergency room during the COVID-19 period and 40% during the same period in 2019 with a decrease of 58.2% during the Covid-19 pandemic compared to the same period before the outbreak of the COVID-19 pandemic. This decrease was also found in other pathologies such as Stab wounds, Facial palsy, Cervico-facial suppurations and others.

In contrast tumoral pathologies showed an increase in admission to the emergency room during the pandemic with 55.5% more patients compared to before the COVID-19 outbreak.

Table 1 regroups the results of our study and Fig. 1 is its graphical representation.

Discussion

The global pandemic of SARS-CoV 2 or COVID-19 infection represents an unprecedented health crisis that the world's population is facing through various protective and hygienic measures to reduce the spread of this plague and limit its impact.

The Kingdom of Morocco has adopted a health strategy to contain and limit the spread of the SARS-CoV 2 virus by instituting a state of health emergency which consists of a curfew with confinement, prohibition of gatherings, closure of all public spaces with restriction of public transport in all cities of the country as well as a limitation of inter-city travel and closure until further notice of the Kingdom's air and sea spaces.

These different measures taken by the Moroccan government have had a direct impact on the number of patients coming to the emergency room and on the nature of the pathologies encountered. These same measures have been taken internationally to reduce the spread of COVID19, which has had an impact on the number of patients coming to the emergency room, as shown by the various studies conducted in Italy and Spain [1–3].

According to our statistical study we found a decrease of more than 56% in the number of patients coming to the emergency room during the first wave of the COVID pandemic compared to the same period of the year 2019. According to the literature data in this context, Gelardi et al. [4] found a decrease of up to 80% compared to the normal flow, as well as Vito et al. [5] and Elli et al. [3] who reported a decrease of 30% and 68% respectively.

The most frequent reason for consultation during both periods was foreign bodies in the ENT sphere, especially in children, with 185 patients during the pandemic COVID-19 and 433 patients during the same period of the year before, which is a decrease of 58.2% in the number of patients; this could be explained by the containment and cessation of work in non-essential sectors due to a better availability of parents. The incidence of wounds (39 vs. 185) and trauma (9 vs. 53) due to road traffic accidents was much lower during the pandemic than in 2019; this could also be explained by the decrease in traffic and the decrease in road traffic accidents and assaults.

On the other hand, the decrease in the number of patients admitted for complicated ENT infections cannot be explained by the COVID-19 pandemic because there was no change in the epidemiology of infectious diseases. The possible explanation for this decrease would probably be the limitation of inter-city connections by the Moroccan authorities and thus a management at the level of local hospitals.

According to Tivitoglu and al. in a paper about Delayed presentation of head and neck cancer patients during COVID-19 pandemic [6] the covid pandemic was responsible for diagnosis and treatment delay of many pathologies and this includes head and neck cancers. This delay was both caused by the patient delay in consulting by ignoring their symptoms during natural disasters by fear to apply to hospitals and or by the overload of the hospitals [6, 7]. In our case the ENT tumoral pathology have known an increase in admission and this could be explained by the fact of the installation of complications which made the patient to consult.

Regarding the influx of non-urgent pathologies such as otological pathologies and cervical masses, there was not a big difference between the number of patients between the two periods, but this could be explained by the lack of access to consultation; the cessation of non-urgent consultations during the period of the pandemic COVID-19 following the recommendations of the learned societies; and in return the important influx of patients during the same period of 2019 inducing a delay of appointments and the presentation of patients in the emergency room.

All the studies undertaken in this context explain this decrease in the influx of patients to the emergency room by the epidemiological context, whether by fear of contracting a nosocomial infection at the COVID-19 or by lack of means of transport and difficulty of access to care by the patients [1–4, 8].

Conclusion

This study highlights that the Covid 19 epidemic and the containment have largely reduced the influx of patients treated in the ENT university emergency department of Marrakech, thus demonstrating that level 2 regional hospitals can take care of the majority of ENT emergencies and leave access to the level 3 university hospital to patients requiring heavy and multidisciplinary management.

Author's Contribution Sara Rochd collected the Data and Obtained consent. Othmane Benhoummad did the statistical study. Othmane Benhoummad and Sara Rochd Wrote the manuscript. Abdelaziz Raji and Youssef Rochdi Critically reviewed the manuscript.

Declarations

Conflict of Interest The authors declared that there is no conflict of interests.

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