

The Effect of COVID-19 First Lockdown on ENT Emergencies: What Happened and What Can We Learn?

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Abstract

Aim and Objective: ENT emergencies are heterogeneous and include infections, inflammatory and traumatic conditions. We observed what appeared to be a dramatic alteration in emergency presentations to our unit during the early phase of 1st COVID-19 lockdown in 2020. This study compares pre COVID-19 presentations with 1st lockdown presentations and examines the overall numbers; conditions encountered and draw conclusions which may influence future planning for ENT services.

Methods: Records for emergency ENT presentations to a regional centre were examined for two comparable 61-day time periods. Presentations for April and May 2019 (pre COVID-19) were compared to April and May 2020 (1st Lockdown). Records were compared with regards to overall numbers, demography, diagnosis and treatment. Admissions for COVID-19 related airway interventions and admissions/attendances for elective complications were excluded.

Results: In the pre COVID-19 group, 649 emergency presentations were recorded: 401 infection related cases, 90 epistaxis, and 158 non-infectious/traumatic cases.

In the 1st Lockdown group, 254 emergency presentations were recorded: 121 infection related cases, 56 epistaxis and 77 non-infectious/traumatic cases.

Overall, there was a 61% reduction in emergency presentations during the 1st Lockdown. Infectious cases reduced by 70%, epistaxis reduced by 38% and non-infectious cases fell by 51%. All of these differences were statistically significant (p value <0.05). The infectious category showed the greatest reduction in presentations and within this category the greatest change was observed in Laryngeal infections (95%), facial Cellulitis (84%) and Tonsil infections (73%).

Keywords: COVID-19; Otorhinolaryngology; SARS-2 virus; Social distancing

Introduction

An exponential rise in cases and deaths from COVID-19 in early 2020 led to the implementation of the first COVID Lockdown in the UK.

As lock down and social distancing were implemented, we observed what seemed to be a dramatic alteration in emergency presentations to our unit.

This study compares pre COVID-19 emergency ENT presentations with those recorded during 1st Lockdown. We

examined the overall numbers; range of conditions encountered and discuss the implications for ENT services in future pandemics.

Material and Methods

Records for adult ENT emergency presentations to our regional centre were examined over two comparable time periods. Data for patients who presented over two periods of 61 days- April-May 2019 (pre COVID-19 period) and April-May 2020 (1st lockdown period) were recorded. Cases were identified through unit records and included all ENT emergencies except tracheotomies/airway interventions for COVID-19 patients and Postop complication of elective cases.

Results

The 649 ENT emergencies presented in the pre COVID-19 period: Ages ranged from 17 years to 97 years (mean age 46 years). Male to Female ratio was 1.1:1 (343:306) (Figure 1).

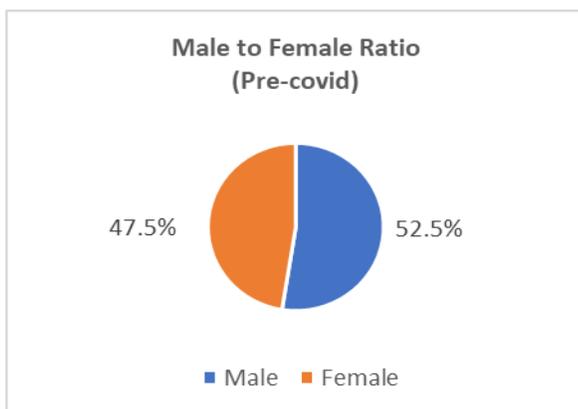


Figure 1: ENT emergencies presented in the pre COVID-19 period.

The 254 ENT emergencies presented during 1st lockdown: Ages ranged from 16 years to 92 years (mean age 52 years). Male to Female ratio was 1.4:1 (148:106) (Figure 2).

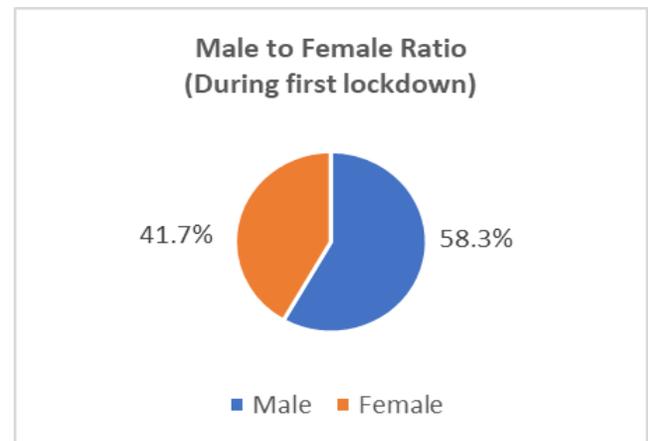


Figure 2: ENT emergencies presented during 1st lockdown.

In the pre COVID-19 period there were 401 infection related cases, 90 epistaxis, and 158 non-infectious/traumatic cases. In the 1st Lockdown group, there were 121 infection related cases, 56 epistaxis and 77 non-infectious/traumatic cases. Comparison of infectious, epistaxis and non-infectious group revealed reductions of 70% (p value 0.005), 38% (p value 0.001) and 51% (p value 0.005) respectively.

In the infectious category- Tonsil related infections fell from 202 to 54, a reduction of 73% (statistically significant p value 0.003). Neck infections (superficial and deep neck abscess) reduced from 52 to 20, a 62% change. Ear related cases (infections and swelling) reduced from 85 to 30, a reduction of 65%. Nose and sinus infections (sinusitis, periorbital Cellulitis) changed from 10 to 11 leading to 10% increase. Facial Cellulitis/swelling cases (including salivary gland) reduced from 32 to 5, a reduction of 84.3%. Laryngeal infections reduced from 20 to 1, a reduction of 95% (statistically significant p value 0.016).

Comparing the non-infectious category- trauma cases fell from 36 to 8, a reduction of 78%. Airway related cases reduced from 29 to 9 a reduction of 69%. Food bolus, foreign bodies reduced from 42 to 23 a -45%. Swallowing related (NG, speech valve, dysphagia, pain, esophageal perf.) changed from 43 to 30 a 30.23% change (statistically significant p value 0.010). Bleeding patients (trachy/oral bleed) reduced from 8 to

7 a 12.5% change (Table 1,2). Comparing epistaxis cases, we noticed 38% reduction during 1st lockdown (From 90 to 56).

Table 1: Pre Covid cases

	No of cases	% cases
Tonsil related	202	31.1
Neck infections	52	8
Ear infections	85	13.1
Nose and sinus infections	10	1.5
Facial cellulitis and infection including salivary glands	32	4.9
Laryngeal infection	20	3.1
Epistaxis	90	13.9
Laceration (neck, ear, face, nose)	36	5.5
Airway related	29	4.5
Food bolus/FB throat	42	6.5
Swallowing related	43	6.6
Bleeding trachy/oral cavity	8	1.2
Total	649	100

Table 2: 1st Lockdown cases

	No of cases	% cases
Tonsil related	54	21.3
Neck infections	20	7.9
Ear infections	30	11.8
Nose and sinus infections	11	4.3
Facial cellulitis and infection including salivary glands	5	2
Laryngeal infection	1	0.4
Epistaxis	56	22
Laceration (neck, ear, face, nose)	8	3.1
Airway related	9	3.5
Food bolus/FB throat	23	9.1
Swallowing related	30	11.8
Bleeding trachy/oral cavity	7	2.8
Total	254	100

Discussion

We found a significant reduction in all emergency presentations to our unit during 1st lock down compared to a similar pre Covid period.

It is possible that social distancing measures introduced in 1st lockdown led to this observed reduction in infections presenting to ENT. However, the mechanism that led to the observed reduction in the non-infectious group is less clear. It is possible that fear of hospital presentation, lack of primary care interface and avoidance of hospital environment lead to cases being managed outside the hospital environment [1].

Conclusion

There was a significant reduction in emergency presentations with both infectious and non-infectious pathologies to our regional ENT unit during 1st Lockdown.

Fear of presentation to hospital and lack of primary care triage may well have contributed to reduction in cases during lock down 1. From that we recommend that the Public and GP's should be made aware of the continued availability of NHS core services during lockdowns.

Summary

- During 1st Lockdown, a significant overall reduction in ENT emergency admissions was observed. This was greatest in the infectious category but was not limited to this group.
- Reduced Infection presentations might have been expected as a result of social distancing reducing community transmission. The observed significant reductions in non-infectious emergencies are difficult to explain.
- Reduced primary care triage may have been expected to lead to an increase in emergency attendances but this was not observed. Fear of hospital attendance or the belief that the NHS was only dealing with COVID-19 during the pandemic may have had a significant effect on presentations.
- In the event of future pandemics, we propose that greater emphasis be placed on ensuring that the

public and primary care sectors are aware of the continued availability of ENT services.

Reference

1. Heward E, Rocke J, Kumar BN, Izzat S. Social distancing reduces rates of recurrent tonsillitis in the paediatric population; a retrospective study of 44 children during the COVID-19 outbreak. Authorea Preprints. 2020.

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