

Main Article

Ms K Stephenson takes responsibility for the integrity of the content of the paper

Cite this article: Stephenson K, George M, Sowerby L, Hopkins C, Kumar N. The UK national registry of ENT surgeons with coronavirus disease 2019: one year on. *J Laryngol Otol* 2021;1–3. <https://doi.org/10.1017/S0022215121002644>

Accepted: 28 September 2021

Key words:

COVID-19; Coronavirus; United Kingdom; Otolaryngologists; Personal Protective Equipment

Author for correspondence:

Ms Kate Stephenson, Department of Paediatric Otorhinolaryngology, Birmingham Children's Hospital, Birmingham, UK
E-mail: drkatestephenson@gmail.com

The UK national registry of ENT surgeons with coronavirus disease 2019: one year on

K Stephenson^{1,2} , M George^{3,4}, L Sowerby^{2,5}, C Hopkins^{6,7} and N Kumar^{8,9}

¹Department of Otorhinolaryngology – Head and Neck Surgery, Birmingham Children's Hospital, Birmingham, UK, ²Young Otolaryngologists of the International Federation of Otorhinolaryngological Societies ('YO-IFOS'), ³Otorhinolaryngology, North Thames Deanery, London, UK, ⁴Association of Otolaryngologists in Training (AOT), UK, ⁵Department of Otolaryngology, Western University, London, Ontario, Canada, ⁶Department of Otorhinolaryngology – Head and Neck Surgery, Guy's and St Thomas' NHS Foundation Trust, London, UK, ⁷British Rhinological Society, UK, ⁸Department of Otorhinolaryngology – Head and Neck Surgery, Wrightington, Wigan and Leigh Teaching Hospitals NHS Foundation Trust, Wigan, UK and ⁹ENT, London, UK

Abstract

Objectives. To report the one-year findings of the UK national registry of ENT surgeons with suspected or confirmed coronavirus disease 2019, and the results of a survey on the coronavirus disease 2019 experience of UK ENT trainees.

Method. An online registry was created in April 2020. A separate survey was circulated electronically to all members of the Association of Otolaryngologists in Training.

Results. The registry recorded 98 clinicians with confirmed or suspected coronavirus disease 2019. The majority of infections were reported in the first wave of spring 2020. Two ENT surgeons were hospitalised and one died. The majority suspected workplace exposure, with a significant proportion attributing this to a lack of personal protective equipment at a time before formal guidance had been introduced. Of the ENT trainees surveyed, almost one-third believed that they had contracted coronavirus disease 2019.

Conclusion. This highlights the importance of ongoing risk-reduction measures, including optimal personal protective equipment and vaccination.

Introduction

At the beginning of the coronavirus disease 2019 (Covid-19) pandemic, there was an urgent need to recognise, manage and reduce the risk of Covid-19 to ENT clinicians. Initially, a great deal of uncertainty and fear was present within the ENT community. Reports from both China and Iran carried horror stories of multiple colleagues being severely afflicted – indeed, the first medical staff mortality in China was reportedly an ENT surgeon.¹ At that time, the risks of asymptomatic transmission and airborne transmission, and the high incidence of anosmia, were poorly known, and access to high-level personal protective equipment (PPE) was typically limited. In healthcare systems across the globe, access to ambulatory and surgical care was restricted to emergency cases. Multiple clinical practice guidelines and position statements were produced. These guidelines and statements have since evolved to better reflect best practice as knowledge of Covid-19 has increased.

Methods

A UK national registry of ENT surgeons either confirmed or suspected to have had Covid-19 was launched in April 2020, with the aim of informing and assisting Covid-19-related guidance, PPE and service planning. This mirrored numerous other national registries and collaboration through the Young Otolaryngologists of the International Federation of Otolaryngologic Societies network was possible.¹ The registry was publicised in a fortnightly message sent to all members of ENT UK (approximately 1720 UK-based working ENT surgeons); it was also sent to subspecialty organisations.

A web-based, 15-item questionnaire was used (SurveyMonkey, San Mateo, California, USA). This questionnaire was used to collect basic demographic and professional data, in addition to details of the confirmed or suspected Covid-19 infection. The full details of the survey questionnaire have been described elsewhere.² The registry was open to both members and non-members of ENT UK, and to trainee as well as consultant grades. Data entry was voluntary and could be completed anonymously. Registry entries could be added either for oneself or for a departmental colleague; it was hoped that this would capture as many affected individuals as possible, including those who might be unable to participate because of the severity of their disease. At the registry outset, the UK governmental policy was not to test for Covid-19 unless an individual had severe symptoms and/or required hospitalisation; it was therefore necessary to include clinically suspected Covid-19 cases in addition to confirmed diagnoses.

A separate survey was undertaken by the UK Association of Otolaryngologists in Training and was circulated to all members (approximately 300 clinicians). This examined Covid-19 infection, associated risk factors and occupational risk assessment. In surveying all members, it differed fundamentally from the ENT UK Covid-19 registry, which attracted only those who had contracted Covid-19. The Association of Otolaryngologists in Training survey covered the period from March 2020 onwards; it opened in December 2020 and closed in April 2021.

Results

In the first four months (3 April to 2 July 2020), the ENT UK registry gathered information relating to 73 individuals, and this was published.² Since that time, the UK National Health Service has attempted to resume and increase elective activity; it also suffered the second viral wave in autumn and winter 2020–2021. We now report a 12-month period of data capture from the opening of the registry on 3 April 2020 to 2 April 2021.

Ninety-two registry entries were made; one entry was excluded as the respondent was not UK-based. A total of 98 individuals were represented; 80 entries were made by the individual concerned and 10 were made on behalf of a departmental colleague or colleagues. Respondents ranged in age from 25 to 68 years (median, 45 years). The ENT subspecialties were relatively evenly represented.

Coronavirus disease 2019 or previous exposure to it was confirmed by testing in 55 of the 98 respondents (56.1 per cent), of whom 9 received a positive antibody test. There was a need for hospitalisation in two cases (2 per cent). One individual required intensive care and tragically died from Covid-19 on 28 March 2020. This individual was cited as the first confirmed frontline hospital worker to die in the UK after testing positive for Covid-19.³

Following our previous report, a further 25 cases were added to the registry, of which 14 had occurred in the first wave prior to May 2020. The reported date of symptom onset ranged from 14 February 2020 to 30 December 2020 (Figure 1). Fifty-four per cent of all respondents stated that their likely source of Covid-19 exposure was inside the workplace, whilst 29 per cent said the source was unknown and 17 per cent thought it was outside the workplace.

Second wave

A second wave of Covid-19 infections occurred in the UK in autumn and winter 2020–2021. Eleven cases of Covid-19 in ENT surgeons were reported during this period (three cases in October 2020, four cases in November 2020 and four cases in December 2020). All were confirmed cases, as would be expected given the widespread availability of testing at this time. Two of the 11 cases were asymptomatic, with 1 detected by testing as part of the Office for National Statistics Covid-19 survey. As in the first wave, these cases were spread throughout the UK. Three individuals stated that their infective source was unknown, whilst two suspected it to be outside the workplace. The remaining six clinicians believed that the source of their Covid-19 infection was inside the workplace. Of note, four of these respondents gave more information and had specified that recommended ('standard') PPE had been worn; namely, a filtering facepiece class 3

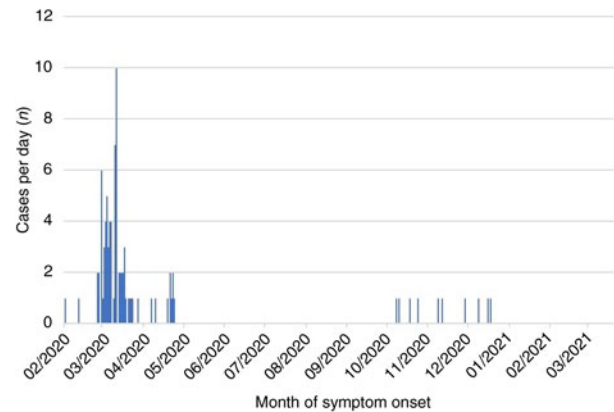


Fig. 1. Reported month of symptom onset for all respondents.

(FFP3) for aerosol-generating procedures, but for everyone else a simple surgical mask and goggles or a visor.

Trainee focus

Sixteen per cent of respondents to the national ENT UK Covid-19 registry ($n = 15$) stated that they were trainees. In contrast, 27 of the 86 trainee respondents of the separate trainee (Association of Otolaryngologists in Training) survey (31 per cent) believed that they had contracted active Covid-19 infection. Of these individuals, 44.5 per cent believed it to be a workplace-based source, 39 per cent were unsure and 16.5 per cent thought that they had contracted Covid-19 outside the workplace. Typical acute Covid-19 symptoms were disclosed, and five trainees detailed significant long-term symptoms such as a reduced sense of smell and/or taste, fatigue, and myalgia. Workplace Covid-19 risk assessments were recorded by 54 per cent of trainees; however, 18 per cent of all respondents had risk factors associated with an increased risk of poor health outcomes and could be classed as vulnerable, necessitating Covid-19 shielding.

Discussion

The response to the Covid-19 pandemic has been a testament to the scientific and medical communities, including ENT. Guidelines and resources such as the ENT UK registry were rapidly developed and information has been widely shared to the benefit of the specialty. In order to mitigate the established risk of aerosol generation during certain procedures, new techniques have also been developed. Some examples include a mastoidectomy and endoscopic skull base surgery tent to trap aerosolised debris, placement of continuous nasopharyngeal suction, and valved endoscopy of the nose and throat ('VENT') masks for nasopharyngoscopy.^{4–7}

ENT UK surveyed PPE availability in March 2020, and campaigned to have Public Health England amend guidelines relating to PPE and aerosol-generating procedures; this guidance was updated on 2 April 2020. As was hoped, the initial registry data helped to advocate for national policy change and enhanced PPE for our specialty. As in the latter part of the first wave, comparatively few cases were registry-reported in the second wave. This may have been as a result of better and more uniform application of PPE, in addition to specialty-specific guidance; however, this cannot be concluded with certainty. The continued occurrence of suspected workplace-based Covid-19 transmission is concerning and highlights

the need to avoid complacency. It also raises important questions about whether optimal PPE policies are in place. Recent UK-based research indicates that upgrading PPE for healthcare workers caring for Covid-19 patients reduces hospital-acquired infections.⁸

The registry also highlights the importance of vaccinating healthcare workers. The first Covid-19 vaccine in the UK was given to a patient on 8 December 2020. Vaccinations for healthcare workers also began that month and subsequently gathered pace. No registry cases were reported in 2021 despite the peak of the second wave occurring around 1 January 2021; vaccination may have been a factor.

- The ENT UK coronavirus disease 2019 (Covid-19) registry and Association of Otolaryngologists in Training survey recorded a significant number of Covid-19 infections
- Most infections were reported early in the first UK Covid-19 wave
- The registry data helped ENT UK to campaign for increased personal protective equipment (PPE)
- The lower number of infections later in the first wave and in the second wave may be linked to increased PPE and vaccination, alongside new clinical practice guidelines
- There is a need for continued vigilance, renewed attention to PPE policy and comprehensive vaccine uptake

A key limitation of the ENT UK registry data quality was the need to include suspected cases at its outset because of the initial lack of confirmatory testing availability. A significant number of reports occurred at this time, in the first month of the registry. Further weaknesses include its voluntary nature and limitation in registry awareness; non-members may not have been reached, and the true number of cases could well be significantly higher. In contrast, the Association of Otolaryngologists in Training survey is susceptible to non-response bias; those who had not contracted Covid-19 might be less likely to complete the survey. The proportion of Covid-19-positive cases reported in trainees (31 per cent) could therefore be considered as an upper estimate.

As a result of Covid-19 infection, a minimum of almost 100 ENT clinicians were unable to work for at least a period of 10 days. The necessary isolation will have extended to and impacted upon their families and on potential contacts at work. The disruption to ENT departments across the UK has been colossal. Free-text comments entered into the registry also offer a glimpse of the significant medium- and long-term impact of Covid-19. Loss of smell and taste lasting over three months, residual fatigue and joint pains, and a substantial reduction in exercise tolerance were amongst the sequelae described by ENT consultants and trainees. This correlates with a worrying recent UK-wide study that revealed around

a third of Covid-19 patients experience symptoms for up to 12 weeks or more.⁹

Conclusion

The ENT UK Covid-19 registry has recorded a significant number of infections, whilst the evolution of clinical practice and risk mitigation during the Covid-19 pandemic has been impressive. Uncertainty has given way to clear practice guidelines that balance minimising risk with clinical care. Coupled with vaccination, this appears to have been quite successful in significantly reducing Covid-19 infections in ENT surgeons. There is, however, a need for continued vigilance, renewed attention to PPE policy and comprehensive vaccine uptake. The Covid-19 saga is sadly far from over, and it is likely to have a long-lasting legacy within the ENT community.

Acknowledgement. We would like to acknowledge and thank the ENT UK administration team.

Competing interests. None declared

References

- 1 Sowerby LJ, Stephenson K, Dickie A, Lella FAD, Jefferson N, North H *et al*. International Registry of Otolaryngologist-Head and Neck Surgeons with COVID-19. *Int Forum Allergy Rhinol* 2020;**10**:1201–8
- 2 Stephenson K, Sowerby LJ, Hopkins C, Kumar N. The UK national registry of ENT surgeons with coronavirus disease 2019. *J Laryngol Otol* 2020;**134**:665–9
- 3 The Guardian. NHS consultant dies from Covid-19. In: <https://www.theguardian.com/world/2020/mar/29/first-nhs-consultant-dies-from-covid-19> [12 July 2020]
- 4 Chen JX, Workman AD, Chari DA, Jung DH, Kozin ED, Lee DJ *et al*. Demonstration and mitigation of aerosol and particle dispersion during mastoidectomy relevant to the COVID-19 era. *Otol Neurotol* 2020;**41**:1230–9
- 5 David AP, Jiam NT, Reither JM, Gurrola JG 2nd, Aghi MK, El-Sayed IH. Endoscopic skull base and transoral surgery during COVID-19 pandemic: minimizing droplet spread with negative-pressure otolaryngology viral isolation drape. *Head Neck* 2020;**42**:1577–82
- 6 Dharmarajan H, Freiser ME, Sim E, Boorgu DSSK, Corcoran TE, Wang EW *et al*. Droplet and aerosol generation with endonasal surgery: methods to mitigate risk during the COVID-19 pandemic. *Otolaryngol Head Neck Surg* 2021;**164**:285–93
- 7 Workman AD, Jafari A, Welling DB, Varvares MA, Gray ST, Holbrook EH *et al*. Airborne aerosol generation during endonasal procedures in the era of COVID-19: risks and recommendations. *Otolaryngol Head Neck Surg* 2020;**163**:465–70
- 8 Ferris M, Ferris R, Workman C, O'Connor E, Enoch DA, Goldesgeyme E *et al*. FFP3 respirators protect healthcare workers against infection with SARS-CoV-2. *Authorea* 2021. Epub 2021 Jun 30
- 9 Whitaker M, Elliott J, Chadeau-Hyam M, Riley S, Darzi A, Cooke G *et al*. Persistent symptoms following SARS-Cov-2 infection in a random community sample of 508,707 people. *MedRxiv* 28 June 2021 (preprint)