The Impact of the COVID-19 lockdown in March 2020 on the level of attendance and visual loss in injection patients attending medical retinal clinics

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Introduction

Anti-VEGF therapies are only an effective treatment against sight-threatening diseases, such as diabtetic macular oedema and age-related macular degeneration if they are administered regularly. This audit addressed concerns that many patients missed their injections during the UK COVID-19 lock-down and experienced a reduction in their vision as a result.

Methods

Open-Eyes™ was used to sample 497 patients who received anti-VEGF injections between 23/01/2020-23/03/2020. Anonymised proformas were used to extract data such as age, gender, injection indication and BCVA for the last appointment before March 23rd, and for their next follow-up appointment. The number of missed appointments and reasons given for missing appointments were recorded. SPSS statistics software was used to analyse any change in BCVA and the relationship between missed appointments and vision loss.

Results Part 1

Overall, 28.8% of patients missed appointments during lock-down, compared to 8.65% over the same time-period in 2019, suggesting a 20.15% increase. Paired T-tests revealed a significant difference (p=0.032) in the average BCVA, shown in logMAR, of those who attended all their appointments (0.195, SD 1.5327) compared to those who missed more than one appointment (0.643, SD 2.0252).

Key Message: During the UK's First COVID-19 Lockdown a significant number of patients missed their anti-VEGF injection appointments and suffered a reduction in their visual acuity as a result.

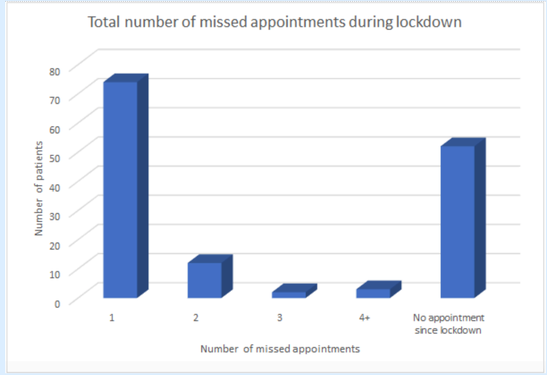


Figure 1)
The bar graph shows the number of patients who missed appointments and how many appointments they missed,

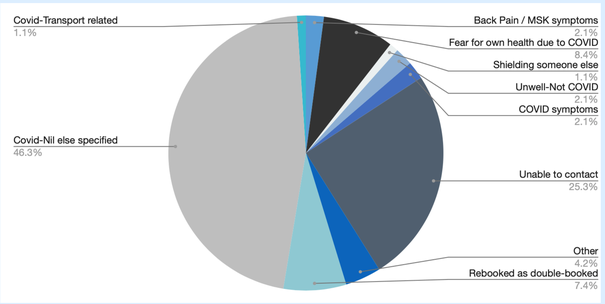
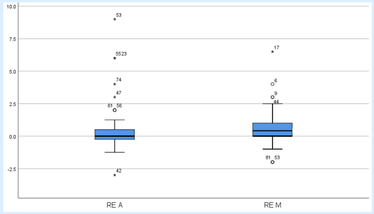
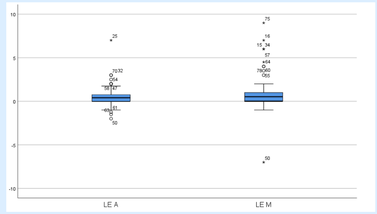


Figure 2)
The Pie Chart shows the different reasons patients cited for missing their appointment during lockdown. The largest presentation of patients cited "COVID-19" with no further qualification as their reason (46.3%).



Box plot showing the mean VA of the left eye in this who missed their appointments vs those who attended

Figure 3)
Box plot showing the mean VA of the right eye (in logMAR) of patents who attended (RE attended) or missed (RE missed) their injection appointment during the lockdown period



Box plot showing the mean VA of the right eye in this who missed their appointments vs those who attended

Figure 4)
Box plot showing the mean VA of the left eye (in logMAR) of patents who attended (LE attended) or missed (LE missed) their injection appointment during the lockdown period

Results Part 2

Regression analysis showed a significant (p=0.032) positive correlation (t=1.754) between the number of appointments missed and the lines of visual acuity lost. Age and male gender positively correlated with the number of appointments missed, all the other variables negatively correlated. 58.9% of patients cited COVID-19 as part of their reason for not attending; describing personal ill-health, shielding or problems with transport.

	Visual Acuity of affected eye LogMAR	
	Visual Acuity before lockdown	Visual acuity after lockdown
Mean Visual acuity	0.352	0.371
95% CI	0.315-0.389	0.304-0.370
Standard Deviation	0.4172	0.4317

Table 1)
Table one shows the VA of the affected eye before and after the lockdown period in all patients. It shows that vision was largely stable for the whole group, if slightly worse after the lockdown period.

	Lines Lost based on UK Snellen Chart	
	Group missing no appointments	Group missing >1 appointment
Average number of Lines Lost (based on standard UK Snellen chart)	0 lines	2 lines

Table 2)
Table two shows the average number of lines lost in the affected eye after lockdown, Those who missed >1 appointment lost on average 2 lines whereas those who missed no appointments lost no lines

Conclusion

Patients were more likely to miss appointments during lock-down, and experienced reduced vision acuity as a result. A concerted effort is needed to make patients aware of the risk of missing anti-VEGF injections to minimize preventable vision loss.