COVID-related delays on Glaucoma surgery and its effect on the progression rate of visual field loss during the waiting period

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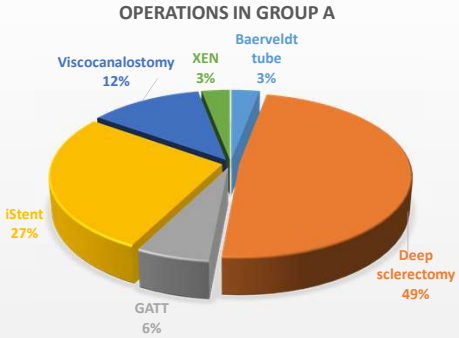
Introduction

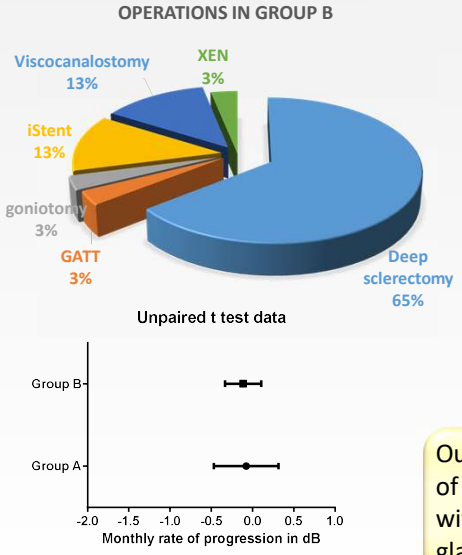
The coronavirus pandemic (COVID-19) had a negative impact on the waiting times of elective ophthalmic surgeries.

In this retrospective case series, we look at how delayed glaucoma surgery, mostly due to the COVID restructuring of healthcare delivery, affected the visual field progression rate during the waiting period from listing to surgery by looking at patients' pre-listing and post-op visual field tests.

Method

We identified 134 glaucoma surgeries performed from January to October 2020. We assigned those who had the necessary pre-listing and post-op visual field tests (VFT) into two cohorts; Group A - (n=33) patients whose surgery was performed within the usual average waiting time of 3.33±1.45 months and Group B - (n=31) patients whose operation was delayed with an average waiting time of 9.65±3.92 months.
We documented the mean deviation (MD) of the pre-listing and post-op VFT, including the number of months in between each VFT.
Thus we established the monthly rate of progression of the mean deviation (MD) by comparing the pre-listing and the post-operative visual field tests.

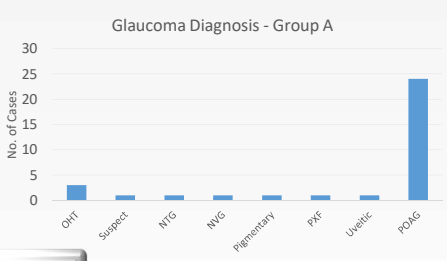


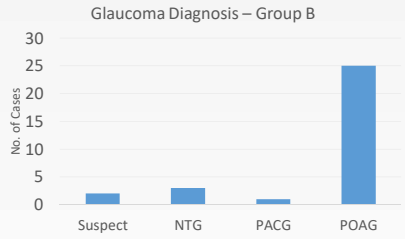


Results

Ninety-four percent (94%) of the patients in the delayed-waiting time group (B) were operated on during or after the COVID restructuring of healthcare delivery (i.e. from July 2020 onwards) whereas only thirty-six percent (36%) of patients in group A, the non-delayed group, were operated during this period. The mean monthly progression rate of MD was -0.11dB (SD 0.19) in group B compared to -0.075dB (SD 0.39) in group A. The medians were -0.09dB and -0.02dB respectively.
The average MD in both groups at listing were similar: group B = -9.87 dB (SD 5.04) vs. group A = -9.89 dB (SD 8.87).
Deep sclerectomies were the most commonly performed operation in both groups (group B = 65% of surgeries vs group A = 49% of surgeries).
Most patients in both groups were primary open angle glaucoma patients (POAG).

Overall, the results show that patients whose surgery was delayed had an accelerated progression rate during their extended waiting period however the difference was not statistically significant – see unpaired t- test.





Conclusion

Our results show that patients whose glaucoma surgery was postponed during the COVID restructuring of healthcare delivery had a sharper decline in their MD compared to those who were operated without significant delay. This emphasises the importance of prioritising glaucoma surgery to reduce glaucoma related loss of sight.