Analysis of the Long-term visual Outcomes of ForeseeHome Remote Telemonitoring - The ALOFT study

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Background:

Wet or neovascular age-related macular degeneration (AMD) is a common cause of vision loss in elderly Americans. There are effective treatments for this advanced stage of AMD. The long-term outcome and prognosis of patients treated for nAMD greatly depends on timely diagnosis. However, in many cases lack of subjective symptoms leads into late presentation. This study is to evaluate the long-term outcomes and predictive value of preferential hyperacuity perimetry (PHP) based home monitoring for detection of conversion from dry to wet age related macular degeneration (AMD).

Methods:

A retrospective review of patients from 5 clinics over a period of 10 years on the PHP-based ForeseeHome monitoring program was performed. The data was obtained through electronic medical records of the patients on the program. Visual acuity at conversion from dry to wet AMD was recorded. The percentage of patients that maintained functional vision of 20/40 was calculated. The program compliance was measured by calculating frequency of testing per week. The testing alerts that did not show immediate conversion to wet AMD, that is the non-exudative alerts, were recorded for their predictive capability for future conversion.

Results:

3334 eyes of 2123 patients were monitored for a median of 3.1 years. A total of 285 eyes converted while monitored at an annual rate of 2.72%. The median VA change from baseline to conversion and recent and conversion to recent were -4, -4 and 0 letters. The median VA at conversion was 20/39. The percentage of patient eyes that maintained ≥20/40 vision was 84% at conversion and 82% at the last follow up visit under treatment. The patients performed 5.2 tests per week and the testing frequency was similar over a period of 10 years. 953 patients received a non-exudative alert. The patients receiving non-exudative alert had a conversion rate of 6% in the first year after receiving the alert compared to 2.72% for the baseline population. The patients receiving non-exudative with a fellow wet-AMD eye had a conversion rate of 22% compared to 14% for the baseline population.

Conclusion:

Patients showed excellent visual acuity at conversion and long-term visual outcomes after conversion, when on the PHP-based home monitoring program to detect conversion from dry to wet AMD. The program demonstrated excellent patient compliance. The alerts that didn't detect immediate conversion to wet AMD showed strong predictive for future conversion value over baseline.

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