# Strategic Approach of Health Information System for Prevention of Macular Degeneration

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# 황반변성 예방을 위한 보건정보시스템의 전략 접근

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Abstract

This study carries out the strategic approach of the health information system to prevent macular degeneration. The survey was conducted with 108 subjects who visited ophthalmology of a general hospital located in A area from April 15 through June 21, 2019. The results of this study are as follows. Firstly, the focus of the eye has improved significantly since the system was applied before the system was applied($X^2$=2.71, p<.05). Secondly, eye congestion has continued to decrease since 6 days ago. Therefore, eye hot packs, massages and acupressure should be done every day for eye care

## 1. Introduction

Macular degeneration **is** a disease caused by aging and inflammation in the central part of the retina. It is the most important part of the intraocular nervous layer called retina[1, 2].

The incidence of macular degeneration was higher in women than in men. It is a disease caused by aging and inflammation in the central part of the retina. It can cause loss of sight when it is severe[3, 4].

The cause of macular degeneration is not yet clear, but genetic and environmental factors work together. The macular degeneration decreases its vision as its function decreases due to aging, genetic factors and toxicity, inflammation, etc. Age-related macular degeneration is a disease that can cause complete blindness in severe cases. People who eat too much fried food have about three times higher rates of macular degeneration[5].

Therefore, this study carries out the strategic approach of the health information system to prevent macular degeneration.

We believe this will contribute to the prevention and treatment of macular degeneration.

## 2. Materials and Methods

### 2.1 Materials

The survey was conducted with 108 subjects who visited ophthalmology of a general hospital located in A area from April 15 through June 21, 2019. After applying the experimental study, the intervention was measured over time : 6, 12, 18, 24 and 30 days.

### 2.2 Methods

The condition of the eyes before and after the system was analyzed with $X^2$-test. The state of eyes over time was used as a t-test.

## 3. Result

### 3.1 Comparison of eye conditions before and after system application

Table 1 shows the comparison of snow conditions before

and after system application. The focus of the eye has improved significantly since the system was applied before the system was applied($X^2$=2.71, p<.05).

[Table 1] Comparison of eye conditions before and after system application

| Variables | Before intervention | After intervention | $X^2$ |
|---|---|---|---|
| Eye focusing | | | |
| good | 21(38.9) | 36(66.7) | 2.71* |
| bod | 33(61.1) | 18(33.3) | |
| eye inflammation | | | |
| Yes | 18(33.3) | 34(63.0) | 6.38* |
| No | 36(66.7) | 20(37.0) | |
| Eye congestion | | | |
| Often | 30(55.6) | 22(40.7) | 2.54 |
| Very little | 24(44.4) | 32(59.3) | |
| other ophthalmic diseases | | | |
| Yes | 19(35.2) | 16(29.6) | 1.06 |
| No | 35(64.8) | 38(70.4) | |
| Information communication usage | | | |
| Excessive | 41(75.9) | 36(66,7) | 7.38 |
| Moderate | 13(24.1) | 18(33.3) | |
| Sleep | | | |
| Sufficient | 23(42.6) | 31(57.4) | 4.95 |
| lnsufficient | 31(57.4) | 23(42.6) | |
| Total | 54(100.0) | 54(100.0) | |

* p<.05

## 3.2 Eye conditions over time

Figure 1 shows the state of the eye before and after the system has been applied over time. Eye congestion has continued to decrease since 6 days ago. Eye congestion has been on the rise again since the 18th.
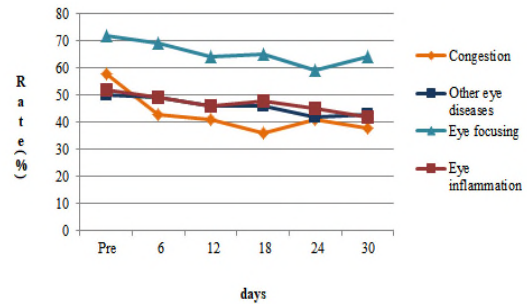


[Fig. 1] Eye conditions over time

## 4. Discussion

This study carries out the strategic approach of the health information system to prevent macular degeneration. As a result, eye congestion statistically significantly decreased after applying intervention than before applying intervention. The finding was similar with the previous studies on glaucoma[5, 6].

This study suggests that macular degeneration patients should control retina to treat this disease. Based on the result, it is anticipated that this paper may be used as basic data for preventing macular degeneration.

After application of the intervention significantly decreased macular degeneration. Therefore, eye hot packs, massages and acupressure should be done every day for eye care

## References

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