



**Objective:** To evaluate the relationship between the presence of prominent opalescent sheen in the retinal nerve fiber layer and visual acuity, intraocular pressure, and stereovision in a 16-year-old teenage group in Taiwan. **Methods:** A total of 16 eyes from 8 subjects were included in the study. The presence of prominent opalescent sheen was assessed using a circular scale. The total area of opalescent sheen was measured, and the area was divided into center, upper, and lower quadrants. The macula center was used as the center of the circle. The area of opalescent sheen in each quadrant was also measured. The relationship between the area of opalescent sheen and visual acuity, intraocular pressure, and stereovision was analyzed using Pearson's correlation coefficient. **Results:** The total area of opalescent sheen was positively correlated with visual acuity (correlation coefficient at 0.153; p value=0.279), intraocular pressure (correlation coefficient at 0.263; p value=0.059), and stereovision (correlation coefficient at 0.069; p value=0.635). Specifically, when the area of opalescent sheen was sub-divided into center, upper, and lower quadrants, the area of opalescent sheen in the center was positively correlated with visual acuity (correlation coefficient at 0.115; p value=0.418), intraocular pressure (correlation coefficient at 0.210; p value=0.135), and stereovision (correlation coefficient at 0.312; p value=0.024). The area of opalescent sheen in the upper quadrant was positively correlated with visual acuity (correlation coefficient at 0.033; p value=0.816), intraocular pressure (correlation coefficient at 0.153; p value=0.279), and stereovision (correlation coefficient at 0.069; p value=0.635). The area of opalescent sheen in the lower quadrant was positively correlated with visual acuity (correlation coefficient at 0.091; p value=0.522), intraocular pressure (correlation coefficient at 0.263; p value=0.059), and stereovision (correlation coefficient at 0.069; p value=0.635). **Conclusion:** The presence of prominent opalescent sheen in the retinal nerve fiber layer is related to visual acuity, intraocular pressure, and stereovision in a 16-year-old teenage group in Taiwan. This study provides baseline information for further analysis.

**Keywords:** Retinal nerve fiber layer; opalescent sheen; visual acuity; intraocular pressure; stereovision.

### Introduction

Retinal nerve fiber layer (RNFL) is the layer of the retina that carries visual information from the retina to the brain. The RNFL is composed of the axons of the retinal ganglion cells (RGCs). The RNFL is the most vulnerable part of the retina to glaucoma, a leading cause of blindness. The presence of prominent opalescent sheen in the RNFL is a sign of glaucoma. The relationship between the presence of prominent opalescent sheen and visual acuity, intraocular pressure, and stereovision has been studied in several studies. The results of these studies have been inconsistent. Some studies have found a positive correlation between the presence of prominent opalescent sheen and visual acuity, intraocular pressure, and stereovision. Other studies have found no correlation. This study aims to evaluate the relationship between the presence of prominent opalescent sheen and visual acuity, intraocular pressure, and stereovision in a 16-year-old teenage group in Taiwan.

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	SE	VA	10P	Stereo
SE	-2.91 ± 3.12	-0.091	0.522	
VA	1.0 ± 0.16	0.153	0.279	
10P	18.42 ± 3.30	0.263	0.059	
Stereo	93.60 ± 148.27	0.069	0.635	

SE = Spherical equivalents, VA = Visual acuity, 10P = intraocular pressure

The correlation between the presence of prominent opalescent sheen in the retinal nerve fiber layer with spherical equivalent (SE), visual acuity (VA), intraocular pressure (IOP), and stereovision (Stereo).

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T e le 3 ma i e he elain e ien a -0.341 (p al e=0.013), 0.133 (p al e=0.348), 0.312 (p al e=0.024), an' 0.001 (p al e=0.992) f SE, A, J f, an' S e e e pe i el. In e e ingl , he p al ef b h SE an' J f e e le han 0.05, in' i a ing ha he pe en e f einal f n' pale en heen in he na ala ea f he ma la be in' i a i e f SE an' J f.

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