

Ocular Findings in Vitiligo and Recommendations for Dermatologists

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Background

- Vitiligo is an autoimmune condition characterized by destruction of melanocytes, leading to depigmentation of skin and hair.
- Melanocytes are present in some extracutaneous tissues, such as the uveal tract of the eye, and may also be implicated in vitiligo.¹

Research Objectives

- A systematic review of the literature was conducted to investigate the ocular manifestations of vitiligo²
- We aim to provide a summary of findings and a framework to guide dermatologists in clinical practice.

Methods

- A search with keywords “vitiligo,” “eye,” “ocular,” and “vision” was performed.
- Peer-reviewed studies of patients with vitiligo and ocular finding(s) were included.
- Articles that were case reviews, case reports, or case series were not included.
- The search resulted in 1715 articles, of which 1444 were excluded in the title and abstract screening and 223 were excluded in the full-text screening due to lack of relevance.
- In total, 48 articles were included.

Table 1. Ocular abnormalities associated with vitiligo and recommendations for dermatologists

Ocular Manifestations	Findings in the Literature	Recommendations
Presence of ocular abnormalities	<ul style="list-style-type: none"> • Periorbital vitiligo = increased risk of ocular findings, namely dry eye disease.^{3,5,20-22} 	<ul style="list-style-type: none"> • Assess degree of poliosis and involvement of eyelids and periorbital areas. • Consider baseline ophthalmology evaluation for those with periorbital vitiligo and ocular symptoms.
Dry eye disease	<ul style="list-style-type: none"> • Vitiligo is associated with dry eye disease, including tear film instability, particularly in those with periorbital vitiligo.^{4,5,21-25} • Those with vitiligo are also at a higher risk of Sjogren disease, which can present with dry eyes.⁶ 	<ul style="list-style-type: none"> • Use OSDI to assess subjective dryness, irritation, burning, and eye fatigue. Asses for Sjogren disease in those with complaints of dry eyes. • Consider referral to ophthalmology for bothersome symptoms.
Glaucoma	<ul style="list-style-type: none"> • Vitiligo may be associated with normal-tension glaucoma, especially in those over the age of 55 and a duration of vitiligo > 13 years.^{10,12} • No evidence of increased intraocular pressure in those with vitiligo compared to controls.^{13,18,26} • Increased glaucoma seen with topical steroid use ranging from 1-10 years especially when associated with a family history of glaucoma.^{13-15,27-29} 	<ul style="list-style-type: none"> • Inquire about family history of glaucoma and periocular use of steroids, including dose, formulation, and length of use. • Consider baseline ophthalmology evaluation for those with vitiligo and higher risk of glaucoma.
Uveitis	<ul style="list-style-type: none"> • Uveitis is associated with a higher risk of vitiliginous lesions, suggesting a potential association between the two inflammatory conditions.⁸ 	<ul style="list-style-type: none"> • Inquire about history of uveitis (eye pain, redness, and/or light sensitivity) • Consider referral to ophthalmology for concerning symptoms.
Retinal and choroidal changes	<ul style="list-style-type: none"> • Vitiligo may be associated with higher prevalence of retinal pigmentary epithelium hyper- and hypopigmentation, atrophy, and/or chorioretinal degeneration with limited impact on visual acuity.^{9,16-19} 	<ul style="list-style-type: none"> • Although there is no known clinical significance to these chorioretinal changes seen in vitiligo, it is important for dermatologists to be aware of these potential findings.

Conclusions

- Vitiligo may be associated with several additional changes within the eye, including pigmentary abnormalities and atrophy of various ocular structures.^{9,16-19}
- Importantly, current evidence underscores that there is no impairment of vision with these structural ocular findings seen in individuals with vitiligo.
- Further investigation with larger studies using homogenous measures can better elucidate these ocular comorbidities and their clinical significance.
- In patients with periorbital vitiligo, a baseline ophthalmology exam with an ophthalmologist to determine the degree of ocular involvement or risk for glaucoma, uveitis, or dry eye disease may be considered.

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