

Clinical & Refractive Optometry is pleased to present this continuing education (CE) article by Dr. Ron Melton and Dr. Randall Thomas entitled **Thygeson's Superficial Punctate Keratopathy**. In order to obtain a 1-hour Council of Optometric Practitioner Education (COPE) approved CE credit, please refer to page 384 for complete instructions.

Thygeson's Superficial Punctate Keratopathy

Ron Melton, OD; Randall Thomas, OD

Subjective

A 27-year-old white man presented with foreign body sensation in both eyes for two days. His history was negative for prior events or causative activities.

Objective

- Best corrected visual acuity was 6/7.5 OD, 6/6 OS.
- Slit-lamp biomicroscopy revealed minor conjunctival hyperemia, OU. There were several tiny white lesions within the corneal epithelium (Fig. 1) of both eyes, which stained with fluorescein (Fig. 2).
- All other findings were normal.

Assessment

- Thygeson's superficial punctate keratopathy (SPK), OU

Plan

- Prescribed Rimexolone 1.0% (Vexol) 1 gt, q.i.d., OU, for one week.
- Also prescribed artificial tears, q.i.d., OU, for one week.
- Return for follow-up in one week.

Follow-Up Visit (one week later)

- Patient was asymptomatic.
- Corneal lesions were barely discernible.
- There was no frank fluorescein staining of either cornea
- BUT was about 10 seconds.
- Nice resolution of acute phase of Thygeson's SPK was noted.

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Fig. 1 The cornea shows several small, grayish-white intraepithelial course granular opacities.



Fig. 2 The cornea shows tiny, intraepithelial, punctate staining defects with fluorescein dye. These defects give rise to foreign body sensation.

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- Discussed with patient the natural history of recurrent acute phases over a 10- to 20-year period.
 - Advised follow-up every six months; sooner if a flare-up were to occur.
 - Use artificial tears as needed to help keep eyes comfortable.

Comment: This is an uncommon keratopathy generally found in females under 40 years of age. The pathogenesis

is unknown. Because of its good sensitivity to corticosteroid suppression, it must be an immune process. Some contact lens wearers find it uncomfortable to wear their lenses during acute phases, while other patients find symptomatic relief with a therapeutic bandage lens. Therapy, as always, must be tailored to individual needs.

General Observations

- This condition is usually bilateral in women under age 40.
- Over 10 to 20 years, there are numerous exacerbations and remissions.
- During exacerbations, patients may present with foreign body sensation, lacrimation, and photophobia with minimal conjunctival injection.
- Slit-lamp exam reveals a few (approximately 4 to 20) tiny, grayish-white, centrally located, intraepithelial coarse granular opacities.
- During remission, these opacities do not stain with diagnostic dyes; however, they do stain lightly during exacerbations.

- Vision may drop a line or two during acute episodes.
- This condition responds dramatically to a several day course of mild topical corticosteroids; however, a slow taper may be needed in some patients.
- Adjunctive therapy with PF artificial tears and/or bandage therapeutic soft lenses may be indicated in some patients.
- The etiology of Thygeson's SPK remains idiopathic.
- Thorough patient education is very important.

***Disclaimer:** Not every detail of every case is discussed, rather the key clinical findings are described. For example, if nothing is said about the corneal status, you should assume that the cornea is normal, etc. When vision is recorded, it should be assumed to be best corrected or pinholed. Regarding therapy, we show how we treated the particular case. Given that medicine is an art, as well as a science, therapy will — and often does — vary with each unique patient presentation depending on severity, known drug allergies, prior treatment, response to therapy, etc.*



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QUESTIONNAIRE

Thygeson's Superficial Punctate Keratopathy

Ron Melton, OD; Randall Thomas, OD

1. Which of the following is **NOT** characteristic of Thygeson's superficial punctate keratopathy?
 - Unilateral presentation
 - Prevalence in women age >65
 - Prevalence in individuals with a history of cataract
 - Prevalence in women under age 40
2. Which of the following is a risk factor for the condition?
 - Impaired blood flow due to long-term cigarette smoking
 - Previous ocular trauma
 - Asian race
 - None of the above
3. Which of the following statements regarding Thygeson's superficial punctate keratopathy is **FALSE**?
 - It is always accompanied by pain
 - It may present with an acute phase, followed by remission
 - Slit-lamp biomicroscopy is recommended for diagnosis of the condition
 - Fluorescein staining of the cornea is not necessarily present
4. Which of the following statements about the condition is **FALSE**?
 - It is an uncommon keratopathy
 - Its etiology is idiopathic
 - It is thought to be part of a viral process
 - Vision may be reduced a line or two during acute episodes

5. Which of the following statements about this case is **TRUE**?
 - Slit-lamp biomicroscopy revealed minor conjunctival hyperemia, OU
 - The patient complained of foreign body sensation in both eyes
 - The patient was negative for prior events or causative activities
 - All of the above

6. All of the following statements are true, **EXCEPT**:
 - Foreign body sensation can be caused by intraepithelial, punctate staining defects
 - This condition is characterized by small intraepithelial coarse granular opacities
 - In this case, the corneal lesions were barely discernable
 - BUT was about 15 seconds

7. Which of the following was **NOT** part of the treatment plan in this case?
 - Topical antibiotics t.i.d. until condition is completely resolved
 - Rimexolone 1.0% (Vexol) 1 gt, q.i.d., OU, for one week
 - Artificial tears, q.i.d., OU, for one week
 - Follow-up in one week from initial visit

8. Which of the following statements is **NOT** true?
 - Photophobia with minimal conjunctival injection may occur during exacerbations
 - Once the acute phase is complete, follow-up is not necessary
 - The condition is sensitive to corticosteroid suppression
 - The condition responds well to a several day course of mild topical corticosteroids

9. Which of the following statements is **TRUE**?
 - Adjunctive therapy with PF artificial tears and/or bandage therapeutic soft lenses may be indicated in some patients
 - Over 10 to 20 years, numerous exacerbations and remissions can be expected
 - Thorough patient education about the condition is important
 - All of the above

10. Which of the following statements about recurrence is **TRUE**?
 - The condition recurs more frequently as the patient ages
 - The condition is more likely to recur in myopic patients
 - Recurrence is likely during times of intense physical or emotional stress
 - The underlying reason for recurrence is not known