Learning Objective:
Topical steroid use has been linked to CSR, even in cases where exposure is limited to small areas of the body.

Takeaway Message:
Clinicians should consider avoiding consistent topical steroid use in patients with risk factors that pre-dispose them to developing CSR, and refer patients with distorted vision to ophthalmology.

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Case 1:
- 64 yo woman presented with palmo-plantar pustulosis on the soles of her feet
- Initially treated with betamethasone dipropionate (BD) 0.05% ointment, twice daily for 3 months
- Switched to BD 0.05%/calcipotriene (BDC) twice daily
- 9 months later, her pustules were still active
- Narrow-band ultraviolet B (NB-UVB) was added to her regimen
- Failed phototherapy and prescribed methotrexate (15 – 20 mg weekly) for 8 months
- Continued to use topical steroids as adjunctive therapy

- Reported blurry vision in her R eye, was seen by an ophthalmologist
- Diagnosed with central serous retinopathy in her R eye

- Discontinued topical steroids, prescribed diclofenac QID, a topical non-steroidal anti-inflammatory drops
- Her vision improved to previous baseline 1 month later
- Now treated with tacrolimus 0.1% and calcipotriene
Cases

• **Case 2**: 56 yo woman presented with 3-year history of a **solitary 7cm psoriatic plaque** on her L lateral ankle.

  - Used multiple topical steroids
    - BDC twice daily
    - clobetasol propionate 0.05% cream
    - betamethasone valerate 0.1% ointment

  - Patient noted that when she used these topical medications, her vision became blurry in one or both eyes.
  - Referred to ophthalmology, diagnosed with recurrent steroid induced CSR.

  - After **discontinuing topical steroids**, her vision improved.
  - Now treated with **tacrolimus 0.1%** to manage her psoriasis.
  - Patient has not reported any ocular symptoms since discontinuation of topical steroids.
Central Serous Retinopathy

- CSR is a common chorioretinal disease, characterized by the accumulation of subretinal fluid
- This leads to localized serous retinal detachments and subsequently, possible loss of vision
- Patients often present with loss of central visual acuity with hyperopic shift
- Typically unilateral and self-limiting, resolves over several weeks to months
- In some cases, it is bilateral and patients will relapse
- Progressive retinal pigment epithelium (RPE) degeneration and atrophy increases the risk of permanent vision loss in these patients
- Diagnosis is made clinically, based on characteristic history, risk factors and retinal evaluation findings
- Occurs more often in women than men (incidence of 9.9 and 1.7 per 100 000 people respectively)\(^2\)
- Mean reported age is between **41 and 51 years**\(^3\)
- **Risk Factors**\(^4\)
  - Age, sex, having a Type A personality

OCT scan showing swelling under the retina in central serous retinopathy\(^13\)
CSR and Steroid Use

- Association between systemic glucocorticoid use and CSR was first reported in 1984.5
- Since then, numerous cases of steroid-induced CSR have been reported
- Most cases typically occur in patients using oral steroids for long periods of time to treat conditions such as systemic lupus erythematosus6 and ulcerative colitis7
- Reports of CSR resulting from inhaled steroid use8 and epidural steroid injection9
- Link between topical steroid use and CSR is poorly understood, limited number of reported cases
  - Reported in patients using topical steroids to treat lichen planus, psoriasis, seborrheic dermatitis, pityriasis versicolor on large or multiple areas of the body10, 11

These two cases report CSR developing in patients using topical steroids over extremely limited areas
- Case 1: topical steroids were used on the soles of the feet
- Case 2: topical steroids were used over a single 7 cm patch

A pilot study measuring changes in choroid thickness in patients taking high doses of corticosteroids – only 1 of 20 patients developed CSR; steroids may increase the risk of CSR in predisposed individuals12
- Clinicians (especially dermatologists and primary care physicians) should be aware of this association and refer patients using topical steroids with decreased visual acuity/ocular symptoms to ophthalmology


