



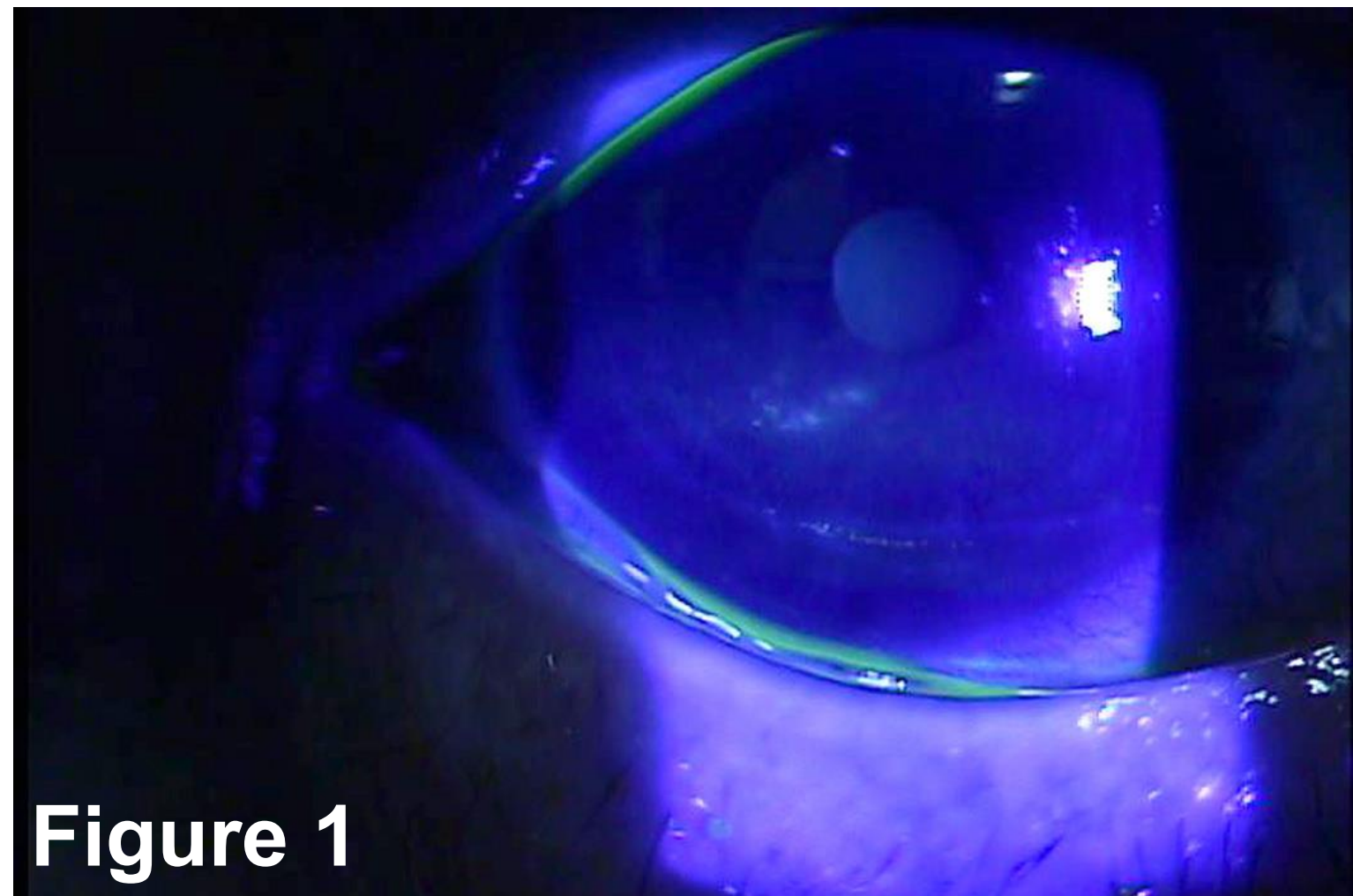
# Reactivation of Herpetic Keratitis in a Patient after Using Two Different Prostaglandin Analogues

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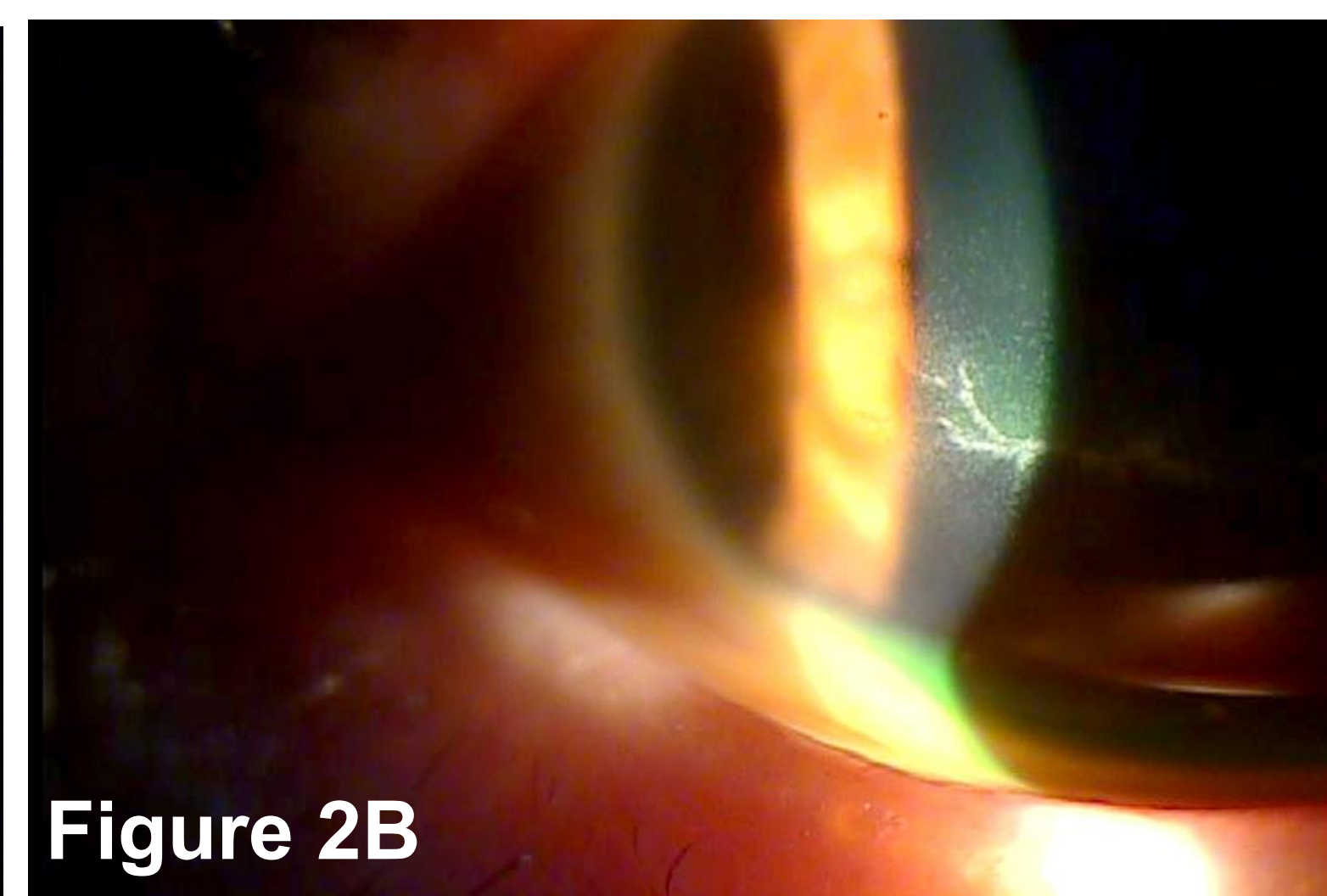
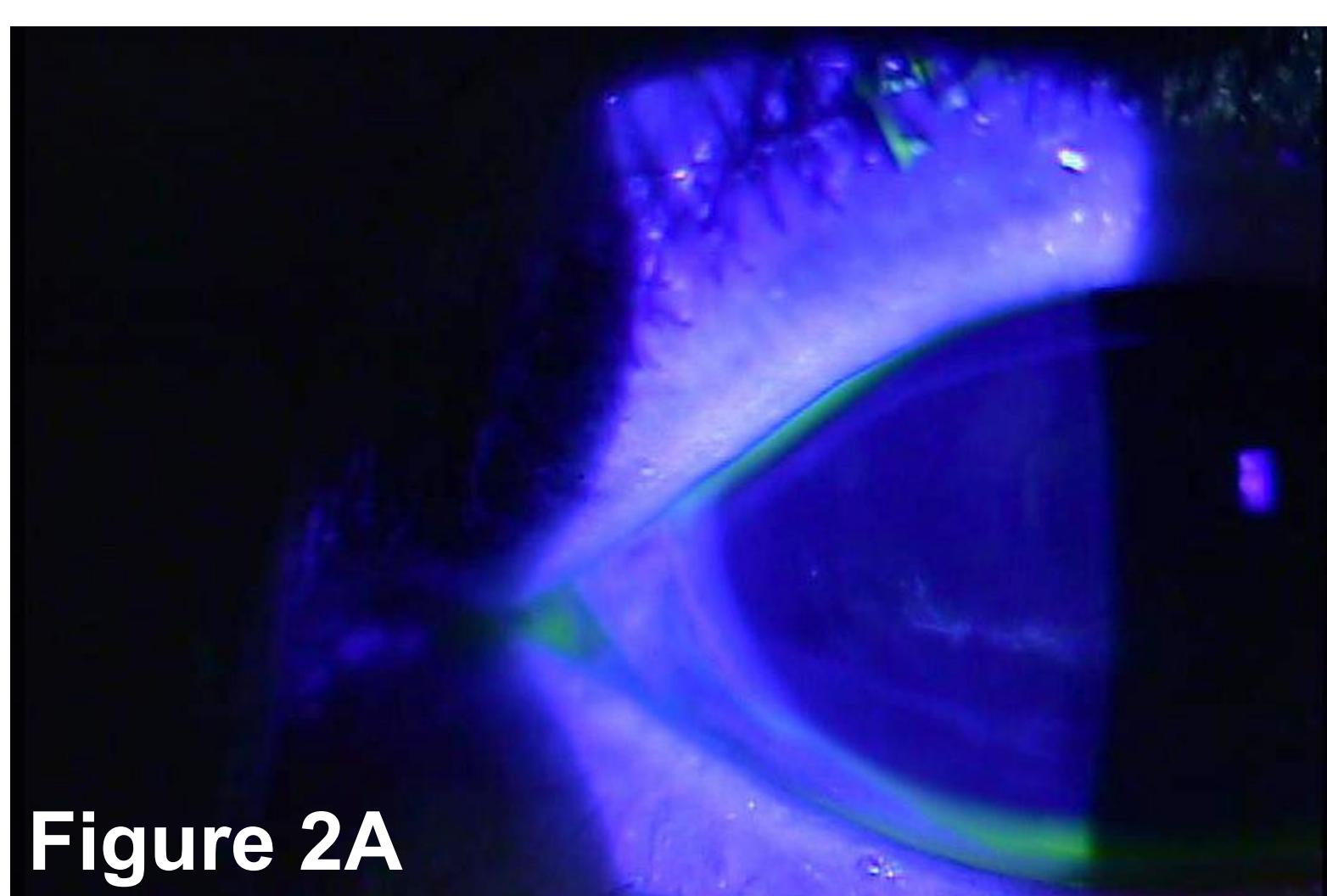
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## CASE SUMMARY

- A 68-year-old female with a history of herpetic keratitis in her right eye after using latanoprost (Xalatan<sup>®</sup>, Pfizer, New York, NY, USA) seven years previous presented with redness, mild ocular pain and tearing in the same eye.
- She had also been prescribed 0.004% travoprost (Travatan<sup>®</sup>, Alcon, Puurs, Belgium) eye drops for both eyes for uncontrolled glaucoma one month earlier.
- 4 weeks after the instillation of the 0.004% travoprost, the patient complained of hyperemia, mild ocular pain and epiphora.
- On slit lamp examination, the cornea in her right eye showed a focal corneal erosion, and there was no inflammatory cell in the anterior chamber (Figure 1).



- But 2 days after first visit, the cornea in her right eye showed a dendritic epithelial defect with focal epithelial erosions (Figure 2A, 2B).



- Reactivation of herpetic keratitis is suspected in the right eye.
  - 0.004% travoprost treatment was discontinued.
  - Acyclovir ointments and oral antiviral agents were started.
- After 10 days of treatment, herpetic keratitis in the right eye recovered completely and no recurrence was found following 6 months.

## DISCUSSION

- Triggers of HSV simplex virus reactivation are below.
  - Stress
  - Fever
  - Ultraviolet light
  - Trauma
  - Surgical procedures such as laser in situ keratomileusis and photorefractive keratectomy
  - Immunocompromise
  - Prostaglandin analogues
  - Menstruation
- There are many case reports of reactivated herpetic keratitis after instillation of prostaglandin analogues, such as bimatoprost, travoprost, and latanoprost.
- However, this is the first case of reactivation of herpetic keratitis after using travoprost in a Korean patient who has history of herpetic keratitis after using latanoprost.
- The possible mechanisms of herpetic simplex keratitis caused by prostaglandin analogues.
  - 1) Prostaglandin analogues stimulate the production of intrinsic prostaglandin.
    - Reactivate the herpes simplex virus.
  - 2) Epinephrine derivatives facilitate the movement of herpes simplex virus into the tear meniscus.
    - Increase host susceptibility and virus infectivity.
- In this case, herpetic keratitis was resolved completely within 10 days of discontinuing prostaglandin analogues and antiviral treatment.
- In conclusion, when starting a prostaglandin analogue in glaucoma patients, it is important to keep in mind the possibility of reactivation herpes keratitis.
- If the reactivation of the herpes simplex keratitis is suspected, prompt intervention is required.