



# MICE, Blood, and Pizza Pie

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## INTRODUCTION

- A healthy cornea is able to clearly transmit and refract light to the crystalline lens. Systemic disease, infections, and trauma can compromise the cornea's transparency by introducing neovascularization into the previously avascular tissue.
- Conventional treatments of corneal neo include topical steroids, penetrating keratoplasty (PK), and Avastin (bevacizumab) injections
- Mitomycin C, most commonly used for certain gastrointestinal cancers<sup>3</sup>, has recently been shown to be effective at eliminating corneal neovascularization<sup>4</sup>

## CASE HISTORY

A 49-year-old male with persistent corneal neo OD x 2yrs

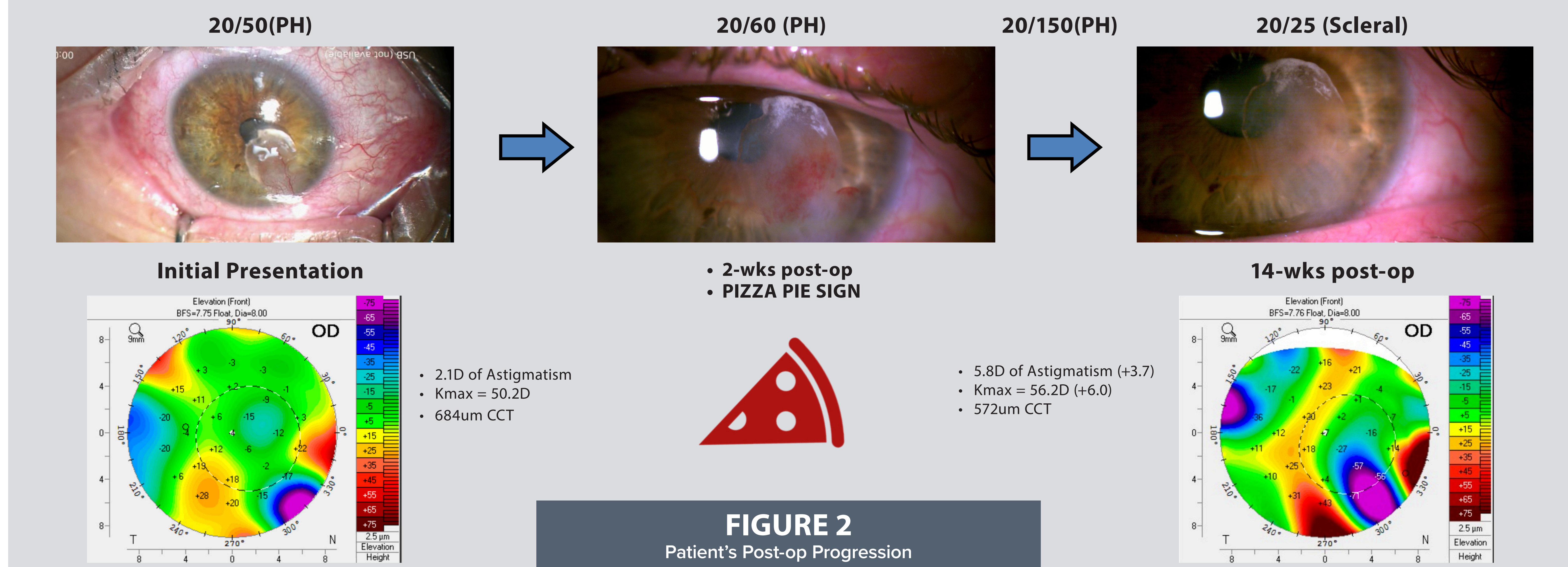
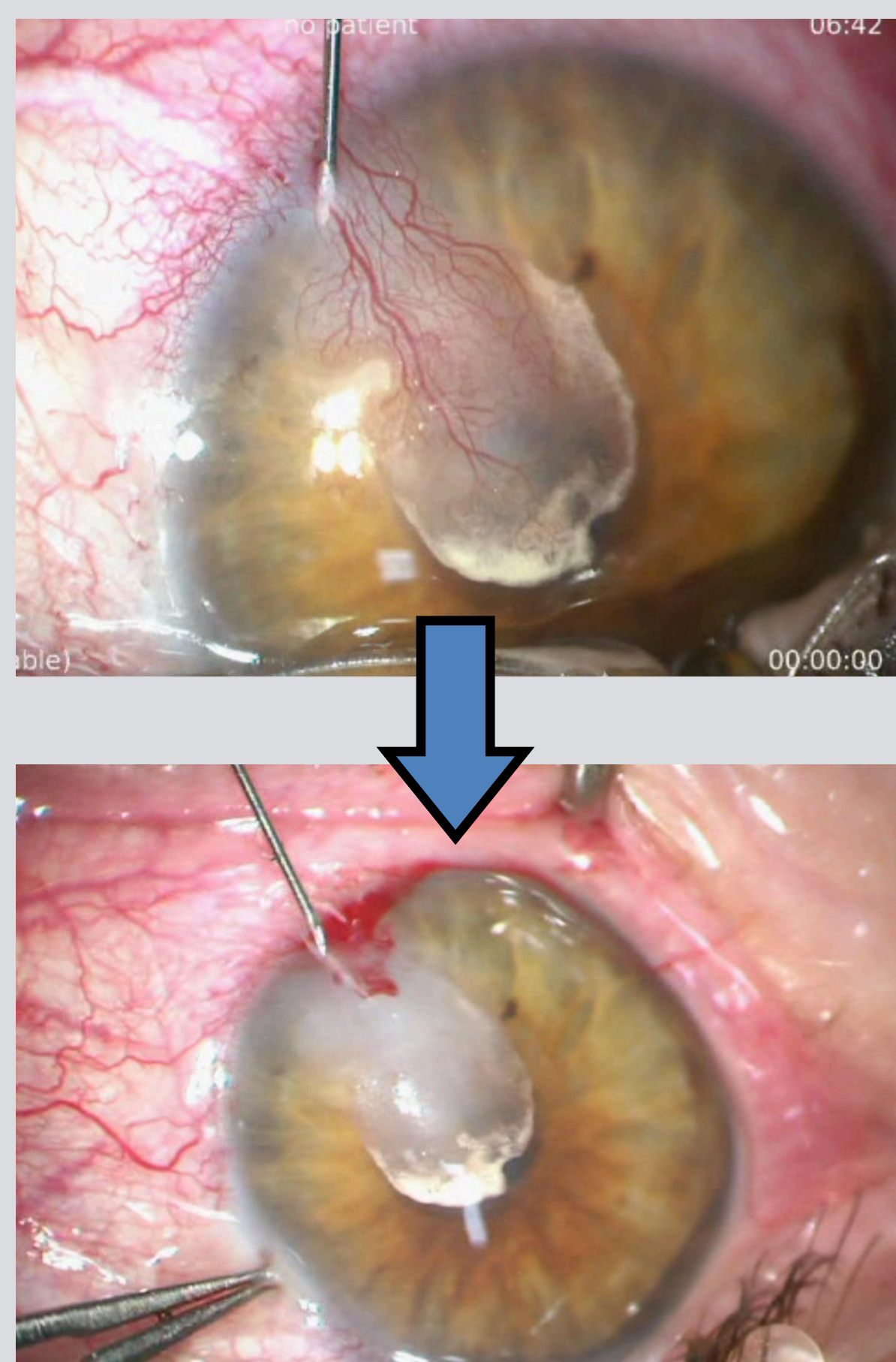
### HPI

- Possible poison ivy insult
- Decreased vision
- History of failed topical steroid treatment

### Ocular History

- Poison ivy keratitis 2yrs ago

**FIGURE 1**  
MICE Procedure



## CLINICAL FINDINGS

	OD
VAcc	20/60-2 (PH 20/50)
Cornea	Thick vascular frond with TWO large vessels at 5:00 extending into visual axis with lipid keratopathy
Lens	1+ PSC (Clear OS)
Pachymetry	684um (581 um OS)

### Treatment Options Considered

- Avastin injection
- PK
- Mitomycin intravascular chemoembolization (MICE)\*

### Mitomycin

- Antineoplastic antibiotic – inhibits DNA synthesis of tumor cells
- Used in trabeculectomies to prevent bleb scarring<sup>4</sup>
- Chemoembolization properties more recently used in hepatocellular carcinoma<sup>1</sup>
- Hypothesized to inhibit vascular endothelial proliferation<sup>1</sup>

## DISCUSSION

- Original MICE study by Mimouni and Ouano involved 3 participants<sup>4</sup>
  - Each attained complete resolution of neo
  - 20/20 in 1yr, 4 months, and 4 months
- MICE common themes:
  - 1-day: ablation of cornea neo
  - 1-3wks: "Pizza Pie Sign"
  - 1-2m: lipid absorption with corneal flattening
    - Induced irregular astigmatism
    - IMPROVED in all 3 study participants<sup>4</sup>
  - Vision may get worse before it gets better
- Our patient
  - Served well by scleral contact lenses
  - Vision currently limited by PSC or stromal haze
  - If intolerable to contact lenses, can now consider PK
    - Risk of rejection substantially less with no neo

## CONCLUSION

- MICE procedure effective
- Variety of post-op courses, but share common themes
- Scleral lenses will likely provide best vision

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