Post filtering-surgery infection
- Can occur days to years after surgery

length of time (range)
- Post filtering-surgery infection
  - Can occur **days to years** after surgery
Post filtering-surgery infection

- Can occur **days to years** after surgery
- Bugs: specific species, another specific species, general class of bacteria
Post filtering-surgery infection

- Can occur days to years after surgery
- Bugs: *Strep* sp, *Haemophilus* sp, Gram (+) bugs
Post filtering-surgery infection

- Can occur **days to years** after surgery
- Bugs: **Strep sp**, **Haemophilus sp**, **Gram (+) bugs**
- Two clinical entities:
  - **Blebitis**: Infected bleb without AC or vitreous involvement
Post filtering-surgery infection

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Blebitis
Post filtering-surgery infection

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Bleb-associated endophthalmitis
Post filtering-surgery infection
- Can occur days to years after surgery
- Bugs: Strep sp, Haemophilus sp, Gram (+) bugs
- Two clinical entities:
  - Blebitis: Infected bleb without AC or vitreous involvement
  - Bleb-associated endophthalmitis: Acute endophthalmitis picture + purulent bleb
- Management:
  - Blebitis: one word and two words
Post filtering-surgery infection

- Can occur days to years after surgery
- Bugs: *Strep* sp, *Haemophilus* sp, Gram (+) bugs
- Two clinical entities:
  - *Blebitis*: Infected bleb without AC or vitreous involvement
  - *Bleb-associated endophthalmitis*: Acute endophthalmitis picture + purulent bleb
- Management:
  - Blebitis: *Topical* and *subconjunctival* antibiotics
Post filtering-surgery infection

- Can occur days to years after surgery
- Bugs: *Strep* sp, *Haemophilus* sp, Gram (+) bugs
- Two clinical entities:
  - **Blebitis**: Infected bleb without AC or vitreous involvement
  - **Bleb-associated endophthalmitis**: Acute endophthalmitis picture + purulent bleb

Management:

- Blebitis: Topical and subconjunctival antibiotics
- Bleb-associated endophthalmitis: ± PPV (abbreviation)
Post filtering-surgery infection

- Can occur days to years after surgery
- Bugs: *Strep* sp, *Haemophilus* sp, Gram (+) bugs
- Two clinical entities:
  - **Blebitis**: Infected bleb without AC or vitreous involvement
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- Management:
  - Blebitis: Topical and subconjunctival antibiotics
  - Bleb-associated endophthalmitis: Intravitreal antibiotics +/- PPV

*(PPV = Pars plana vitrectomy)*
Post filtering-surgery infection

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- Management:
  - Blebitis: Topical and subconjunctival antibiotics
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    - Final VA tends to be worse than after treatment for acute-onset endophthalmitis after cataract surgery
Post filtering-surgery infection

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Two clinical entities:
- **Blebitis**: Infected bleb without AC or vitreous involvement
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Management:
- **Blebitis**: Topical and subconjunctival antibiotics
- **Bleb-associated endophthalmitis**: Intravitreal antibiotics +/- PPV
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Post filtering-surgery infection

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Why is bleb-associated endophthalmitis tend to have a worse visual outcome than does acute post-CE endophthalmitis?

- Blebitis: Topical and subconjunctival antibiotics
- Bleb-associated endophthalmitis: Intravitreal antibiotics +/- PPV

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**Management:**
- **Blebitis**: Topical and subconjunctival antibiotics
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*Why is bleb-associated endophthalmitis tend to have a worse visual outcome than does acute post-CE endophthalmitis?*
Because the bugs that cause bleb-associated endophthalmitis are more virulent than those that typically cause acute post-CE endophthalmitis.

- **Final VA tends to be worse** than after treatment for acute-onset endophthalmitis after cataract surgery
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Speaking of acute post-CE endophthalmitis… In that context, what does EVS stand for?

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Blebitis: Topical and subconjunctival antibiotics

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Post filtering-surgery infection
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**Bugs:**
- Strep sp,
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- **Blebitis:** Infected bleb without AC or vitreous involvement
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- **Blebitis:** Topical and subconjunctival antibiotics
- **Bleb-associated endophthalmitis:** Intravitreal antibiotics +/- PPV

*Final VA tends to be worse than after treatment for acute-onset endophthalmitis after cataract surgery*

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Speaking of acute post-CE endophthalmitis…In that context, what does EVS stand for? Endophthalmitis Vitrectomy Study
**Post filtering-surgery infection**

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**Speaking of acute post-CE endophthalmitis...**

*In that context, what does EVS stand for?*

**Endophthalmitis Vitrectomy Study**

*The EVS investigated two issues regarding the management of acute post-CE endophthalmitis. What were they?*

1) 

2) 

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**Blebitis:** Topical and subconjunctival antibiotics

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- Final VA tends to be worse than after treatment for acute-onset endophthalmitis after cataract surgery
Post filtering-surgery infection

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Blebitis: Infected bleb without AC or vitreous involvement

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Management:
- Blebitis: Topical and subconjunctival antibiotics
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Speaking of acute post-CE endophthalmitis... In that context, what does EVS stand for? Endophthalmitis Vitrectomy Study

The EVS investigated two issues regarding the management of acute post-CE endophthalmitis. What were they?
1) What is the role of PPV vs intravitreal abx injection?
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Final VA tends to be worse than after treatment for acute-onset endophthalmitis after cataract surgery.
Post filtering-surgery infection

- Can occur days to years after surgery

**What did the study show with respect to PPV efficacy? Did it improve visual outcomes?**

- Blebitis: Topical and subconjunctival antibiotics
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**Why is bleb-associated endophthalmitis tend to have a worse visual outcome than does acute post-CE endophthalmitis?**

1) **What is the role of PPV vs intravitreal abx injection?**
2) How effective are systemic antibiotics?

The EVS investigated two issues regarding the management of acute post-CE endophthalmitis.

- What is the role of PPV vs intravitreal abx injection?
- How effective are systemic antibiotics?

What did the study show with respect to PPV efficacy? Did it improve visual outcomes?

- Depends—if VA was LP or worse at presentation, visual outcome was better with PPV.
- However, if VA was better than LP, there was no difference between the PPV and intravitreal-abx-only groups with respect to final visual outcome.
Q/A

- **Post filtering-surgery infection**
  - Can occur days to years after surgery

*What did the study show with respect to PPV efficacy? Did it improve visual outcomes?* Depend— if VA was or worse at presentation, visual outcome was better with PPV.

- Blebitis: Topical and subconjunctival antibiotics
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Post filtering-surgery infection

Can occur days to years after surgery

Bugs: Strep sp, Haemophilus sp, Gram (+) bugs

Two clinical entities:

- Blebitis: Infected bleb without AC or vitreous involvement
- Bleb-associated endophthalmitis: Acute endophthalmitis picture + purulent bleb

Management:

- Blebitis: Topical and subconjunctival antibiotics
- Bleb-associated endophthalmitis: Intravitreal antibiotics +/- PPV

Final VA tends to be worse than after treatment for acute-onset endophthalmitis after cataract surgery

What did the study show with respect to PPV efficacy? Did it improve visual outcomes? Depends—if VA was LP or worse at presentation, visual outcome was better with PPV. However, if VA was better than LP, there was no difference between the PPV and intravitreal-abx-only groups with respect to final visual outcome.

Speaking of acute post-CE endophthalmitis…In that context, what does EVS stand for?

Endophthalmitis Vitrectomy Study

The EVS investigated two issues regarding the management of acute post-CE endophthalmitis.

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Because the bugs that cause bleb-associated endophthalmitis are more virulent than those that typically cause acute post-CE endophthalmitis.
Post-filtering-surgery infection

- Can occur months to years after surgery
- Bugs: Strep sp, Haemophilus sp, Gram (+) bugs
- Two clinical entities:
  - Blebitis: Infected bleb without AC or vitreous involvement
  - Bleb-associated endophthalmitis: Acute endophthalmitis picture + purulent bleb
- Management:
  - Blebitis: Topical and subconjunctival antibiotics
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What were they?
1) What is the role of PPV vs intravitreal abx injection?
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What did the study show with respect to systemic antibiotics and visual outcome?

Intravenous antibiotics did not improve final visual outcome

Why was this conclusion controversial?
The antibiotics used in the EVS were ceftaz and amikacin. The EVS was criticized for the choice of Ceftaz over vanc, which has better coverage of Gram+ cocci. Because of this, the effectiveness of IV abx remains an open question for many clinicians.
Post filtering-surgery infection

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Post-filtering-surgery infection

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- Bleb-associated endophthalmitis: Intravitreal antibiotics +/- PPV
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**Post-filtering surgery infection**

- **Can occur months to years after surgery**
  - Bugs: *Strep sp*, *Haemophilus sp*, Gram (+) bugs

- **Two clinical entities:**
  1. *Blebitis*: Infected bleb without AC or vitreous involvement
  2. *Bleb-associated endophthalmitis*: Acute endophthalmitis picture + purulent bleb

**Management:**

- **Blebitis**: Topical and subconjunctival antibiotics
- **Bleb-associated endophthalmitis**: Intravitreal antibiotics +/- PPV

- **Final VA tends to be worse** than after treatment for acute-onset endophthalmitis after cataract surgery

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  - **Blebitis**: Infected bleb without AC or vitreous involvement
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- Management:
  - Blebitis: Topical and subconjunctival antibiotics
  - Bleb-associated endophthalmitis: **Intravitreal antibiotics +/- PPV**

Should treatment decisions in bleb-associated endophthalmitis be based on EVS guidelines (ie, PPV if VA LP or worse, otherwise tap + intravitreal antibiotics only)?
Post filtering-surgery infection

- Can occur days to years after surgery
- Bugs: *Strep* sp, *Haemophilus* sp, Gram (+) bugs
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  - *Blebitis*: Infected bleb without AC or vitreous involvement
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Management:

- *Blebitis*: Topical and subconjunctival antibiotics
- *Bleb-associated endophthalmitis*: Intravitreal antibiotics +/- PPV

Should treatment decisions in bleb-associated endophthalmitis be based on EVS guidelines (ie, PPV if VA LP or worse, otherwise tap + intravitreal antibiotics only)?
No! The EVS was designed to address endophthalmitis after cataract, not glaucoma surgery. Thus there is no compelling reason to extrapolate its findings to glaucoma surgery.