

# Endophthalmitis Vitrectomy Study (EVS) - 1995



## Objective

To determine whether there is a benefit of intravenous antibiotics or early vitrectomy for post-operative endophthalmitis

## Methods

**Design:** Multicenter RCT

**Sample Size:** N = 420 across 24 centers in US

**Treatment Groups:**

- Vitrectomy with IV antibiotics (n= 106)
- Vitrectomy with no IV antibiotics (n=112)
- Tap/Biopsy with IV antibiotics (n=100)
- Tap/Biopsy with no IV antibiotics (n=102)

**Outcome Measures:**

- 3 month and 9-12 month visual acuity assessment (ETDRS)
- Media clarity assessed clinically and photographically

## Results

Point 1: Systemic antibiotics may not be necessary, and they increase cost, length of stay, and toxic side effects

- No difference in final VA or media clarity with or without systemic antibiotics

Point 2: Routine PPV is not necessary for patients with better than light perception (LP) vision at presentation

- For patients HM or better, no difference in final VA or media clarity with or without immediate PPV was performed

Point 3: PPV is beneficial for patients with LP-only vision. For these patients, PPV was found to have a...

- Three-fold increase in frequency of achieving 20/40 or better VA (33% vs. 11%)
- Two-fold chance of having 20/100 or better VA (56% vs 30%)
- 50% decrease in frequency of severe visual loss (20% vs 47%)
- 70% decrease in the need for enucleation (7% vs 23%)
- PPV patients had significantly improved vision over entire range of vision ( $P < 0.001$ )

**TLDR: EVS established an LP cutoff for routine PPV in post-op endophthalmitis and determined no need for systemic antibiotics after intravitreal antibiotics. If a patient can see HM, you can give intravitreal antibiotics and wave them goodbye instead of going straight to the OR.**