

Diabetic Macular Edema Trial (DRCR T) - 2015



Objective

To compare the efficacy and safety of three commonly used VEGF-inhibitors in the treatment of diabetic macular edema vision impairment

Methods

Design: RCT

Sample Size: 660

Treatment Groups:

- 224 to aflibercept
- 218 to bevacizumab
- 218 to ranibizumab

Outcome Measures:

- Primary: Effect of treatment on visual acuity
- Effect of treatment on retinal thickening
- Safety: Ocular adverse effects and systemic adverse effects

Results

Point 1: Visual acuity gains were best in aflibercept group, but improved in all three treatment groups

- The mean improvement in the visual acuity at 1 year was greater with aflibercept (+13.3 letters) than with bevacizumab (+9.7) or ranibizumab (+11.2)
- At better presenting visual acuities (20/40 or better), the difference between injection agent was not statistically significant; however, when presenting vision was 20/50 or worse, the difference was more pronounced

Point 2: Central subfield thickness decreased in all groups, but was greatest for aflibercept aflibercept group

- Retinal thickness decreased $169 \pm 138 \mu\text{m}$ with aflibercept, $101 \pm 121 \mu\text{m}$ with bevacizumab, and $147 \pm 134 \mu\text{m}$ with ranibizumab

Point 3: Adverse events were similar between treatment groups

- There were 1 case of endophthalmitis in the aflibercept and ranibizumab groups respectively, none in bevacizumab
- Rate of death was 1% in aflibercept group, 2% in bevacizumab group, and 2% in ranibizumab group.

TLDR: Treatment of diabetic macular edema vision impairment was found to be effective and safe across all three commonly used VEGF-inhibitors