Treatment of Age-related Macular Degeneration With Photodynamic Therapy (TAP) - 1999

THE LENS

Objective

To determine whether the risk of vision loss in patients with subfoveal choroidal neovascularization (CNV) caused by age-related macular degeneration (AMD) can be reduced using photodynamic therapy (PDT) with verteporfin.

Methods

Design: Two multicenter, double-blinded, placebo-controlled RCT

Sample Size: 609
(all patients received a laser light at 689 nm delivering 50 J/cm^2)

Treatment Groups:
- 207 to placebo
- 402 to verteporfin (PDT)

Outcome Measures:
- Primary outcome: Proportion of eyes with <15 letters lost at 1 year after study entry
- Proportion of eyes with <30 letters lost compared to baseline
- Mean changes in visual acuity, contrast threshold, & angiographic outcomes

Results

Point 1: A larger percentage of patients treated with verteporfin lost fewer than 15 letters of visual acuity compared to placebo at 12 months
- 246 (61%) of 402 eyes assigned to verteporfin versus 96 (46%) of 207 eyes assigned to placebo loss <15 letters (P<0.001).

Point 2: Patients with predominantly classic CNV lesions (CNV occupying 50% or more of the entire lesion) given verteporfin showed visual acuity benefits
- 67% verteporfin versus 39% placebo showed <15 letter loss (P<0.001)
- There was no statistically significant difference when CNV was between 0% to 50%.

Point 3: No significant difference in attributable adverse events were noted between the two groups
- Transient visual disturbances: 18% verteporfin vs 12% placebo
- Injection-site adverse events: 13% verteporfin vs 3% placebo
- Transient photosensitivity reactions: 3% verteporfin vs 0% placebo

TLDR: Verteporfin therapy can safely reduce the risk of vision loss in patients with predominantly classic CNV secondary to AMD with minimal systemic or ocular harm

Photodynamic therapy of subfoveal choroidal neovascularization in age-related macular degeneration with verteporfin: one-year results of 2 randomized clinical trials--TAP report. Treatment of age-related macular degeneration with photodynamic therapy (TAP) Study Group. Arch Ophthalmol. 1999 Oct;117(10):1329-45. Erratum in: Arch Ophthalmol 2000 Apr;118(4):488. PMID: 10532441.