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Title **Age-Related Macular Degeneration: The Role of Current Treatment Strategies**

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www.gencat.cat/salut/depsan/units/aatrm/pdf/degeneracion_macular_edad-aatrm09.pdf

Aim

To analyze the available scientific evidence regarding the effectiveness and safety of photodynamic therapy, pegaptanib, and ranibizumab in treating neovascular type age-related macular degeneration (AMD).

Conclusions and results

One systematic review of photodynamic therapy, two randomized controlled trials of pegaptanib (VISION study) and three of ranibizumab (MARINA, ANCHOR, FOCUS), which met the inclusion criteria, were selected. All were of high quality, except for the VISION study, which was rated as having moderate quality.

Patients treated with these drugs *lost less vision* compared to their corresponding control group at 12 months ($p < 0.05$). The benefit was 11% with photodynamic therapy and 15% with 0.3 mg pegaptanib. For the 0.5 mg ranibizumab dose, between 22% and 32% of the patients benefited from ranibizumab or ranibizumab plus photodynamic therapy, compared to placebo or placebo plus photodynamic therapy. The benefit of ranibizumab was maintained at 24 months, and 37% of the patients did not suffer a loss of *less than 15 letters* compared to placebo. Moreover, patients treated with pegaptanib and ranibizumab *improved visual acuity* compared to the control group (4% with 0.3 mg pegaptanib and 18%-35% with 0.5 mg ranibizumab; $p < 0.05$). Adverse effects were generally transient and rated from mild to moderate. The meta-analysis could not be performed due to differences observed between the studies.

To prevent visual loss in patients with neovascular AMD, ranibizumab is effective and safe compared to placebo for up to 2 years of treatment (*Degree A of recommendation*) and compared to photodynamic therapy up to 1 year (*Degree B)*. Also, pegaptanib may be effective and safe compared to placebo during 1 year of treatment (*Degree B*). Photodynamic therapy is effective and safe in patients with predominantly classic neovascular AMD compared to placebo up to 2 years (*Degree A*).

Methods

Scientific evidence up to December 2007 was reviewed via the main biomedical data databases. Randomized clinical trials and systematic reviews were selected. Using the criteria of the Scottish Intercollegiate Guidelines Network, two reviewers assessed internal validity and the degree of recommendation of the studies. The scientific evidence was synthesized.

Further research/reviews required

Additional studies are required to assess the impact of treatment by means of health-related quality of life tools and in terms of the treatment's efficiency.

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