INAHTA Briefs

Issue 2009/009

Title **Management of Neovascular Age-Related Macular Degeneration: Systematic Drug Class Review and Economic Evaluation**

Agency **CADTH, Canadian Agency for Drugs and Technologies in Health**
Suite 600, 865 Carling Ave, Ottawa, Ontario K1S 5S8 Canada;
Tel: +1 613 226 2553, Fax: +1 613 226 5392; publications@cadth.ca, www.cadth.ca

Reference Technology report number 110, 2008.
ISBN 978-1-897465-58-5 (print), 978-1-897465-59-2 (electronic)

Aim

To assess the impact of pharmaceutical management of neovascular age-related macular degeneration (AMD).

Conclusions and results

We assessed: (1) the relative effectiveness of pegaptanib, bevacizumab, ranibizumab, triamcinolone, anecortave acetate, or placebo (alone or in combination) versus V-PDT; (2) the timing for initiation of therapy for the comparisons listed above; the effects of retreatment with a different regimen in persons who did not have a satisfactory clinical response to a particular regimen; and (3) the relative cost effectiveness of the various forms of pharmaceutical management of neovascular AMD.

The evidence is insufficient to determine whether combination therapy is superior to monotherapy in treating neovascular AMD, and no direct evidence demonstrates the effect of timing or retreatment on health. Evidence for bevacizumab's effectiveness is less compelling than other anti-VEGF agents. Pegaptanib or ranibizumab represent optimal treatment strategies. Pegaptanib is the least costly strategy, and ranibizumab would be likely to be the most cost-effective strategy for those willing to pay more than an additional $59 000 per quality-adjusted life-year. These results are most sensitive to the cost of ranibizumab therapy and change in visual acuity.

Recommendations

Not applicable.

Methods

A systematic literature review identified 18 articles describing 9 unique randomized trials, 1 controlled trial, and 5 case series. Two cost-utility analyses in adults 40 years of age and older from the perspective of the Canadian public healthcare system and a patient lifetime time horizon were conducted. Pegaptanib, ranibizumab, and V-PDT were compared for predominantly classic lesions, and pegaptanib and ranibizumab were compared for all neovascular lesions. An analysis of budget impact and ethical and psychosocial issues was also conducted.

Further research/reviews required

More rigorous studies of bevacizumab are needed to better understand its efficacy and side-effect profile, especially compared with ranibizumab.

Written by Brown A, Hodge W, Kymes S, Cruess A, Blackhouse G, Hopkins R, McGahan L, Sharma S, Pan I, Blaiman D, and Morrison A, CADTH, Canada

ISSN 1654-501X