TITLE: Long-Term Use of Bevacizumab for the Treatment of Age-Related Macular Degeneration: Safety

DATE: 14 August 2014

RESEARCH QUESTION

What is the clinical evidence regarding the long-term safety (at least 2 years) of bevacizumab for the treatment of age-related macular degeneration?

KEY FINDINGS

One systematic review and two randomized controlled trials were identified regarding the long-term safety (at least 2 years) of bevacizumab for the treatment of age-related macular degeneration.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2014, Issue 7), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2009 and July 31, 2014. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials and non-randomized studies.

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One systematic review and two randomized controlled trials were identified regarding the long-term safety (at least 2 years) of bevacizumab for the treatment of age-related macular degeneration. No relevant health technology assessments, meta-analyses, or non-randomized studies were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One systematic review\(^1\) examined the safety outcomes of intravitreal ranibizumab (Lucentis) and bevacizumab (Avastin) reported in studies for age-related macular degeneration (AMD). The authors concluded that the long-term studies examining bevacizumab were of limited value due to their small sample sizes and lack of consistent observation of adverse events (AEs). No definitive conclusions regarding the safety of bevacizumab could be made based on the results of identified case series included in the systematic review.

Two randomized controlled trials\(^2,3\) reported two year safety results for bevacizumab where study patients received bevacizumab or ranibizumab monthly or on an as needed dosing schedule. The frequency of arterial thrombotic events,\(^2,3\) hospital admission for heart failure,\(^2\) and death\(^3\) were similar between the bevacizumab and ranibizumab groups. The authors suggested that safety outcomes were poorer in those patients who received discontinuous treatment.\(^2\) In one study,\(^3\) the proportion of patients with one or more systemic serious AEs was significantly greater in the bevacizumab group. However, the authors indicated that the implications of these results were uncertain because the events observed had not previously been associated with the inhibition of vascular endothelial growth factor.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials


Non-Randomized Studies
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews – Time Interval Unclear


Non-Randomized Studies

All Anti-VEGFs


Time Interval Unclear


Review Articles


Additional References