Age-related Macular Degeneration: Economic impact of implementing treatment guidelines

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Background

Drugs for age-related neovascular macular degeneration (AMD) reverse the disease process, usually leading to gains in visual acuity. Ranibizumab (Lucentis®) was licensed for AMD in the EU in 2007. Bevacizumab (Avastin®), has been widely used globally off-license based on splitting up doses licensed for cancer.

Purpose

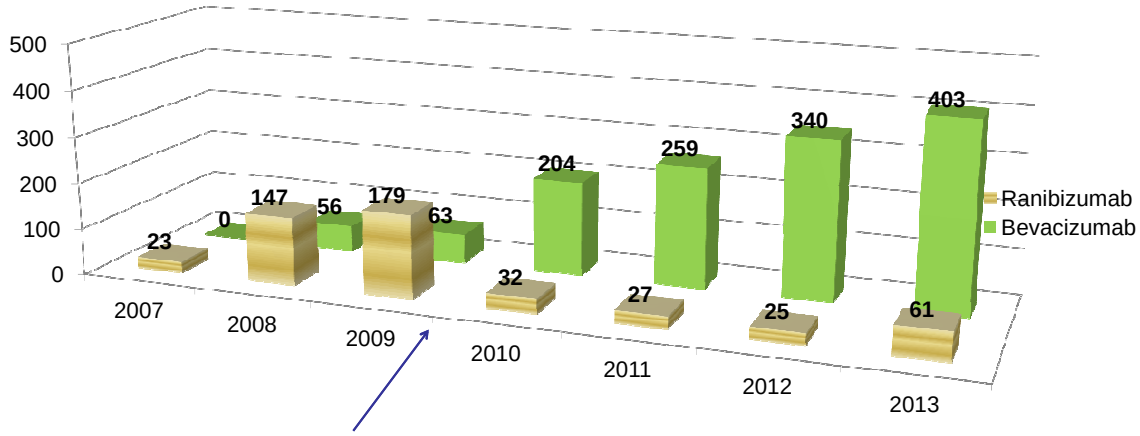
The aim of the study was to assess the use and cost of intravitreal ranibizumab and bevacizumab, after the implementation of AMD treatment guidelines.

Material and Methods

A retrospective analysis of the use of both drugs in our hospital from 2007 to 2013 was conducted. At the end of 2009 AMD treatment guidelines were implemented in our hospital: ranibizumab 0.5 mg only can be prescribed after poor response to three monthly injections of bevacizumab 1.25 mg. We performed an excel-based budget impact analysis.

Results

A total of 494 doses of ranibizumab were administered to 107 patients. Bevacizumab was administered to 418 patients with a total of 1325 doses.
Prescriptions for each drug were as follows (from 2007 to 2013):



In 2010 after the implementation of the protocol, ranibizumab prescriptions decreased 82.1%, from 179 (2009) to 32 (2010). Bevacizumab prescriptions increased 223.8%, from 63 (2009) to 204 (2010).

Ranibizumab injection average cost was €985.69 per injection. Each bevacizumab injection cost €16.40. Ranibizumab costs in the whole seven year period were €486,929. Bevacizumab costs in the same period were €21,730. Global saving costs for implementing this protocol in our hospital were €1,151,128

Conclusions

Our study has shown that considerable savings may be obtained by promoting the most cost-effectiveness alternative as first line treatment for AMD. The role of hospital pharmacists has been crucial, involving the implementation of clinical protocol and the process of splitting up bevacizumab doses.