

Economic impact of anti-VEGF in Ophthalmology

A.Pasquale, E. Taormina, C. La Seta

U.O.C. di Farmacia - AOUP Paolo Giaccone Palermo

Background: The use of drugs with active ingredients produced through genetic engineering is often associated with oncology, rheumatology, dermatology and gastroenterology treatment although today there is wider use in cardiology (canakimumab) for certain products for the treatment of ocular pathologies, with particular reference to the retinal pathologies. Currently the active principles used in ophthalmology are ranibizumab, pegaptanib and bevacizumab. The first two active ingredients are marketed in syringes ready for intravitreal use, but bevacizumab does not have a formulation different from that for use in oncology. Ranibizumab is a fragment derived from the immunized antibody bevacizumab that exerts its anti-neogenic and vascular permeability-reducing actions by blocking VEGF (endothelial growth factors) with particular reference to isoforms VEGF165, VEGF121 and VEGF110. It is able to penetrate all the layers of the retina and enter the subretinal space.

Materials and Methods The consumption data were obtained from the accounting system of the integrated Polyclinic company, data on doses were obtained from a selection of patients who have had treatment from one to four years, and data were extracted from the AIFA monitoring log for ophthalmic medicines.

Conclusions In the near future the aging population will increasingly request good treatment of AMD. The latest ISTAT data indicate an increase in population over the age of 65 years (18.5% of the population). Evaluating the incidence of AMD at 3.68% (EUREYE study) of which 20% is wet AMD forces us to consider the need to revise our opinion of the sustainability of the treatment of the disease.

Results During the years 2007 to 2011 the share of the budget absorbed by anti-VEGF increased from € 58,375.1 (45% of annual expenditure) to 246,592.71 (84% of expenditure). Given that the administration characteristics cannot be standardized we recorded the number of administrations for the patients treated. 8 patients that have been identified for a year's treatment received 3 to 4 administrations at an average cost per patient of Euro 4,023.25. 19 patients were treated for 2 years with average spending Euro 6,776 (4-9 doses) and a total cost 128,774 euros. 8 patients were treated for 3 years, average Euro 10,201.81 (6-13 doses) total expenditure Euro 81,614.5; Finally 5 patients were treated for 4 years, average Euro 13,334.2 (9-17 doses) total spending Euro 66,671

It was possible to note that as the years of treatment increased the gap between administrations widened.

Purpose: Economic impact of anti-VEGF in ophthalmology To evaluate the economic impact of anti-VEGF drugs on the budget of the ophthalmology Outpatients Unit and the average cost of treatment with ranibizumab considering a series of patients treated for age-related macular degeneration (AMD) at the Ophthalmology OU in the Paolo Giaccone Hospital, Palermo.