Avastin has similar effect to Lucentis in treating wet age-related macular degeneration

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The one year results from a study into whether two drug treatments (Lucentis and Avastin), are equally effective in treating neovascular or wet age-related macular degeneration (wet AMD), have been reported today at an international research meeting in Fort Lauderdale, Florida. The findings will also appear online shortly in the leading journal *Ophthalmology*.

Wet AMD is a common cause of loss of vision in older people. In the UK, around 70 per cent of people will experience severe loss of sight within two years of being diagnosed.

For four years, a team of scientists and eye specialists from 23 hospitals and UK universities, including Queen's University Belfast, University of Bristol, University of Liverpool, University of Southampton and University of Oxford, have worked to investigate whether Lucentis and Avastin are equally effective.

610 people with wet AMD entered a trial, known as IVAN, which is one of the largest ever carried out in the field of eye disease in the UK.

The IVAN study's one year results show there was no functional difference in the effects of both drugs and that the effects of Lucentis and Avastin on preventing vision loss were similar.

The study also indicates that in the UK, the NHS could save £84.5 million annually, based on injecting 17,295 eyes each year, by switching from Lucentis to Avastin, and administering the treatment on an as-needed basis.

Patients received injections of the drug into the affected eye every month for the first three. Groups were then subdivided to receive either injections at every visit thereafter or only if the specialist decided there was persistent disease.

The study also investigated whether treatment as needed is as effective as monthly treatment, and revealed that giving the drugs as needed, compared to regularly every month, resulted in almost identical levels of vision. The 'as needed' group received on average seven injections over the first year compared to 12 for the monthly treatment group.

Professor Usha Chakravarthy of Queen's University Belfast's Centre for Vision and Vascular Science, who led the research study team said: "The IVAN results at the end of the first year show that Lucentis and Avastin have similar effectiveness. Regardless of the drug received, or treating monthly or as needed, sight in the affected eye improved by between one and two lines on a standard eye test."

The one year results from the IVAN study complement the one year findings of a sister study, CATT, performed in the United States which reported last year. In addition, people in IVAN had their ability to read small print and their reading speed tested, and these tests also showed no difference between drugs or methods of treatment.

With respect to possible adverse effects of the drugs, in IVAN a slightly higher rate of arteriothromboembolic events (mainly heart attacks and strokes) or heart failure was observed among people treated with Lucentis compared with Avastin, which was not observed in CATT.

When the results of the two trials were combined no difference in heart attacks or strokes was observed between the two drugs.

Both IVAN and CATT have consistently shown no difference in mortality between the groups receiving different drugs in the elderly study populations, but both found a slightly higher rate of other serious adverse events in those who received Avastin. This evidence became stronger when the results were combined.

The researchers state that the findings in relation to adverse events may not be attributed to Avastin directly due to a number of reasons, including that events were more common in patients treated less frequently, and that they arose mainly from hospitalisations for a wide variety of causes not previously associated with either drug.

The IVAN study was funded by the National Institute for Health Research Health Technology Assessment (NIHR HTA) programme.

Belfast Health and Social Care Trust sponsored the study. Professor Ian Young, Director of Research and Development at the Trust said: "Clinical trials of this standard and breadth are of vital importance to the NHS, and our clinicians, in enabling us to provide optimal patient care. I congratulate the research team in reaching this milestone in such a challenging study."

The IVAN study is continuing to follow participants to two years. A more detailed analysis will be presented when the two year time point is reached.

More information: 'Ranibizumab versus Bevacizumab to treat Neovascualr Age-Related Macular Degeneration: One year findings from the IVAN randomized trial' by Usha Chakravarthy, PhD, FRCS (Queen's University Belfast); Simon P Harding, MD (University of

Liverpool); Chris A Rogers, PhD & Barnaby C Reeves, DPhil (University of Bristol); Susan M Downes, MD (Oxford University Hospitals NHS Trust); Andrew J Lotery, MD, PhD (University of Southampton); Sarah Wordsworth, PhD (University of Oxford) will be published shortly in Ophthalmology.