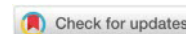


MEASURED - REAL VALUES OF INTRAOCULAR TENSION, 24 H AFTER THE APPLICATION OF BROLUCIZUMAB INTRAVITREAL INJECTION IN PATIENTS WITH wAMD

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Abstract: Intraocular tension (OHT) refers to any situation in which the intraocular pressure (IOP) is greater than 21 mm Hg in one or both eyes, measured with a non-contact tonometer on 2 or more occasions. To present the real values of intraocular tension 24h after the application of Brolucizumab intravitreal injection of wAMD (wet Age-related macular degeneration) in the age over 50 years. Screening examination of patients for intraocular tension was done between 2023 and 2024 at the Italian Eye Hospital in Pristina 24h after the application of Brolucizumab wAMD intravitreal injection. Results: A total of 100 patients participated in the studies, 36 women and 64 men over 50 years old. After measuring intraocular pressure (IOP), only 10 patients had IOP values of 21mmHg or 10%, where most were male, 6% and 4% were female, and age. most of them were over 60 years old, only in one case the age was 56 years. Conclusions: Management of patients with intraocular pressure risk a global risk that plays a vital role despite all the unreliable data considering patients, status, life expectancy and personal preferences. Looking at our tension is presented in the intraocular in the number of patients passed after the application of wAMD is the last considering also the age of patients over 60 years 99% and only 1% 56 years. We can a clear relationship between intraocular tension and the establishment of the application of Brolucizumab intravitreal injection in patients with wAMD with a real reduction in the incidence of blindness from wAMD, which has a cost to the health care system. However, there is mixed evidence on the impact of anti-VEGF on other patient-related outcomes.

Keywords: Intraocular tension, wAMD, Brolucizumab intravitreal injection.

Field: Medical sciences and Health© 2024 by the authors.

1. INTRODUCTION

Ocular hypertension is a term used to describe intraocular pressure (IOP) greater than two standard deviations above the mean, above 21 mm Hg from population studies (mean = 16 mmHg, normal range 10-21 mm Hg), in the absence damage to the optic nerve or vision. However, 5% of all patients are found to have IOP above 21 mm Hg (10% of patients above 40). Traditionally, people have struggled with the decision to treat these patients, who are called suspected ocular hypertensives or suspected ocular hypertensives glaucoma. Criteria were lacking to distinguish those patients who are at a higher risk of progression to primary open-angle glaucoma (POAG) from those who will not progress to POAG without intervention (Kaushik et al, 2021)

Age-related macular degeneration (AMD) is a progressive disease of the retina that leads to damage to the cells responsible for vision. The condition can severely affect an individual's independence and quality of life. Sight loss often causes numerous problems with performing everyday activities such as reading, driving and recognizing faces, and this affects mobility with the risk of isolation. (Thomas et al, 2021, Brandl et al., 2019; 2019; Joachim et al. 2019).

Age-related macular degeneration (AMD) is a degenerative disease of the human retina that affects individuals over the age of 55. This heterogeneous condition arises from a complex interaction between age, genetics, and environmental factors, including smoking and diet. It is the leading cause of blindness in industrialized countries. Worldwide, the number of people with AMD is projected to increase from 196 million in 2020 to 288 million by 2040. (Keenan et al., 2021; Wong et al., 2019; Korb et al., 2019; Li et al. 2019; Colijn et al. 2019; Wild et al., 2019).

Those whose complications of wet macular degeneration have progressed to loss of central vision have a higher risk of depression and social isolation. With profound vision loss, people may experience visual hallucinations. This condition is known as Charles Bonnet syndrome.

It is important to have routine eye examinations to identify early signs of macular degeneration to prevent complications that result from this disease.

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2. AIM OF THE STUDY

When drugs alone do not help, the Italian Eye Hospital in Pristina offers a number of treatment options, including anti-VEGF injections (Brolucizumab), photodynamic therapy and laser surgery that destroys the problematic blood vessels under the retina. Brolucizumab is FDA-approved for the treatment of age-related neovascular (wet) macular degeneration and DME. (Peter Stein et al, 2019)

3. MATERIAL AND METHODS

Ophthalmologists at the Italian Eye Hospital in Pristina trained in retinal diseases have extensive experience with wet macular degeneration, treating more than 200 patients with this condition each year. Screening of patients for intraocular tension was done between 2023 and 2024 at the Italian Eye Hospital 24h after wAMD application. Participants provided both oral and written informed consent after a thorough explanation of the studies. We included patients with AMD according to the classification system introduced by the Beckman Macular Research Classification Committee.

4. RESULTS

Out of 100 patients before receiving the anti-VEGF injection (Brolucizumab) with blood pressure below 21 mmHg, there were a total of 90 patients, while with IOP 21 mmHg + only 10 patients, of which 4 are women and 6 are men (Table 1. and Figure 1).

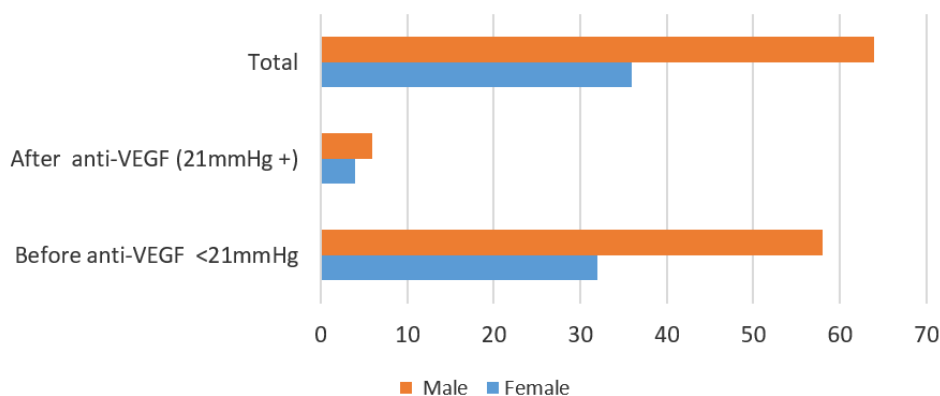
Table 1. Number of patients with IOP before and after anti-VEGF

Gender	Female	Male	Percentage
Before anti-VEGF < 21mmHg	32	58	90%
After anti-VEGF (21mmHg +)	4	6	10%
Total	36	64	100%

Source: Authors research

Figure 1. Number of patients with IOP before and after anti-VEGF (blue-Males, red-Female)

Number of patients with IOP before and after anti-VEGF



Source: Authors research

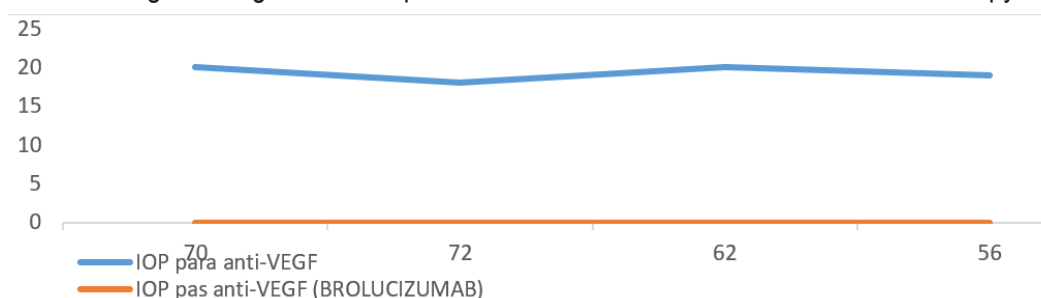
All of the female patients before receiving the anti-VEGF injection (Brolucizumab) have a IOP below 21 mmHg, after the treatment the IOP was 21 mmHg (Table 2. and Figure 2).

Table 2. Age of female patients and IOP before and after anti-VEGF therapy

Gender	Age	IOP before anti-VEGF	IOP after anti-VEGF (Brolucizumab)
Female	70	20	21 mmHg
Female	72	18	21mmHg
Female	62	20	21mmHg
Female	56	19	21mmHg

Source: Authors research

Figure 2. Age of female patients and IOP before and after anti-VEGF therapy



Source: Authors research

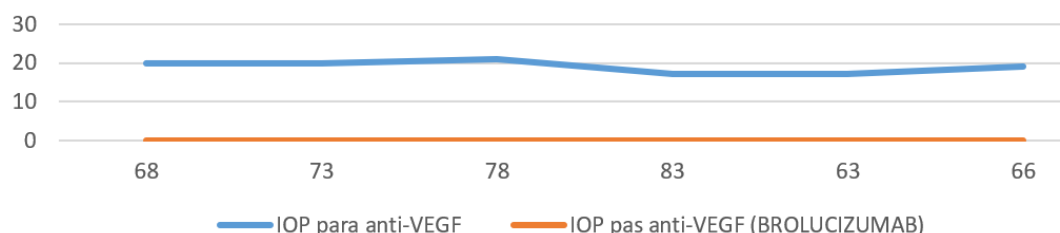
Five of the male patients (before receiving the anti-VEGF injection (Brolucizumab) have an IOP below 21 mmHg, after the treatment the IOP was 21 mmHg (Table 3. and Figure 3).

Table 3. Age of male patients and IOP before and after anti-VEGF therapy

Gender	Age	IOP before anti-VEGF	IOP after anti-VEGF (BROLUCIZUMAB)
Male	68	20	21mmHg
Male	73	20	21mmHg
Male	78	21	21mmHg
Male	83	17	21mmHg
Male	63	17	21mmHg
Male	66	19	21mmHg

Source: Authors research

Figure 3. Age of male patients and IOP before and after anti-VEG therapy
Age and IOP of male patients after anti-VEGF



Source: Authors research

5. CONCLUSIONS

AMD-related macular degeneration (AMD) is a chronic eye disease characterized by progressive degeneration in the central retina (the macula) is the main cause of severe visual impairment in all. Genetic, environmental and animal factors are strongly associated with AMD. Common symptoms are visual distortions such as metamorphopsia (straight lines appear wavy), blurred vision and scotoma (blind spots). These symptoms are seen in later stages of AMD. AMD is classified into two different forms: the

non-neovascular or atrophic (dry) form and the neovascular or exudative (wet) form. Brolicizumab was demonstrated as a safe and effective alternative in improving anatomical and functional parameters of eyes with wAMD in this analysis of 100 subjects respectively. Clinical studies included in this dossier support forms of BEOVU (Brolicizumab-dbl) for familial neovascular macular degeneration associated with me. Although it is not possible to be anti-VEGF for wAMD, following therapy shows progressive picture over time, due to macular atrophy and fibrosis. (Liisborg, 2022). Looking at our tension is presented in the intraocular in the number of patients passed after the application of wAMD is the last considering also the age of patients over 60 years 99% and only 1% 56 years. We can a clear relationship between intraocular tension and the establishment of the application of Brolicizumab intravitreal injection in patients with wAMD with a real reduction in the incidence of blindness from wAMD, which has a cost to the health care system. However, there is mixed evidence on the impact of anti-VEGF on other patient-related outcomes.

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