

## **BCBe/04/Neb-Gla/081**

**Sponsor:** Berlin Chemie AG

### **Influence of Nebivolol on Ocular Perfusion in patients with Glaucoma and Arterial Hypertension**

**Patients and methods:** Nebivolol 5 mg and Bisoprolol 5 mg were administered to 19 patients with arterial hypertension and glaucoma.

**Objective:** To investigate the effects of a temporary switch in systemic betablocker treatment to nebivolol on retrobulbar hemodynamics in glaucoma patients with arterial hypertension after 6 weeks.

Primary efficacy parameters were changes in the peak systolic velocity (PSV) and end-diastolic velocity (EDV) in the short and long posterior ciliary artery (SPCA, LPCA) recorded by color Doppler imaging (CDI) in the glaucoma patients before and 6 weeks after oral Nebivolol (5 mg/ day) or Bisoprolol (5 mg/ day)

**Results:** 19 patients completed the trial with n=10 in the Nebivolol and n=9 in the Bisoprolol group. No significant difference was observed between the two groups for any of the primary endpoints six weeks after the change in systemic hypertensive medication. Only the increase in the PSV in the SPCA in the Nebivolol group reached statistical significance.

**Conclusions:** Despite a significant increase in the PSV of the SPCA in the Nebivolol group, no significant differences were observed in retrobulbar blood flow velocities between the glaucoma patients receiving Nebivolol or Bisoprolol probably due to the small sample size affecting the results.

The potential of Nebivolol in the treatment of glaucoma patients with systemic hypertension merits further investigation in a larger study, being this a pilot study.