Functional and anatomical results after a single intravitreal Ozurdex injection in retinal vein occlusion: a 6-month follow-up -- the SOLO study.

To evaluate the efficacy of intravitreal dexamethasone implants in eyes with cystoid macular oedema (CME) secondary to branch retinal vein occlusion (BRVO) or central retinal vein occlusion (CRVO) in the clinical everyday practice, examine the effects of early retreatment and compare the results with the GENEVA study. The charts of 102 patients (102 eyes) with CME secondary to BRVO (n = 54) or CRVO (n = 48) treated with Ozurdex at 8 centres were retrospectively reviewed. The patients were examined monthly over a 24-week period. Slit-lamp biomicroscopy, measurement of best-corrected visual acuity (BCVA) and measurement of the central retinal thickness (CRT) with spectral-domain optical coherence tomography (SD-OCT) were performed at baseline and at every follow-up examination. With progression of the disease (loss of one line or increased central retinal thickness (CRT) of 150 μm), a reinjection of Ozurdex or anti-VEGF was offered. Additional supplementing sectorial or panretinal laser photocoagulation was considered based on the individual status of the retina. In the BRVO group, the median BCVA was 0.6 logMAR (Snellen equivalent of 0.25) at baseline and improved to 0.4 logMAR (Snellen equivalent of 0.40) after 4 weeks, 0.3
logMAR (Snellen equivalent of 0.50) after 8 weeks, 0.4 logMAR (Snellen equivalent of 0.40) after 12 weeks, 0.5 logMAR (Snellen equivalent of 0.32) after 16 weeks, 0.4 logMAR (Snellen equivalent of 0.40) after 20 weeks and 0.45 logMAR (Snellen equivalent of 0.35) after 24 weeks. The mean CRT was 559 ± (SD) 209 μm at baseline and it decreased to 335 ± 148 μm after 4 weeks, 316 ± 137 μm after 8 weeks, 369 ± 126 μm after 12 weeks, 407 ± 161 μm after 16 weeks, 399 ± 191 μm after 20 weeks and 419 ± 196 μm after 24 weeks. In the CRVO group, the median BCVA was 0.7 logMAR (Snellen equivalent of 0.20) at baseline and improved to 0.4 logMAR (Snellen equivalent of 0.40) after 4 weeks, 0.4 logMAR (Snellen equivalent of 0.40) after 8 weeks, 0.6 logMAR (Snellen equivalent of 0.25) after 12 weeks, 0.6 logMAR (Snellen equivalent of 0.25) after 16 weeks, 0.5 logMAR (Snellen equivalent of 0.32) after 20 weeks and 0.52 logMAR (Snellen equivalent of 0.30) after 24 weeks. The mean CRT at baseline was 740 ± 351 μm and it decreased to 419 ± 315 μm after 4 weeks, 352 ± 261 μm after 8 weeks, 455 ± 251 μm after 12 weeks, 497 ± 280 μm after 16 weeks, 468 ± 301 μm after 20 weeks and 395 ± 234 μm after 24 weeks. The BCVA improvement was statistically significantly better (p< 0.05) compared with baseline in both groups at every follow-up visit. The mean CRT maintained significantly better when compared with baseline in both groups at all follow-up visits. Early reinjection was indicated in BRVO in 40.7% after 17.5 ± 4.2 weeks and in CRVO in 50% after 17.68 ± 4.2. Six eyes (11%) with BRVO received a sectorial laser photocoagulation at a mean interval of 22 ± 5.0 weeks. Seven eyes (15%) with CRVO received a panretinal laser photocoagulation after a mean interval of 18 ± 7.0 weeks. The BCVA improvement and the mean CRT reduction were statistically significant (p < 0.05) compared with baseline in both groups at every follow-up visit. Dexamethasone intravitreal implant resulted in a significant improvement of the BCVA and reduction of CME in patients with BRVO or CRVO. Early retreatment after 16 weeks instead of 24 weeks, like in the GENEVA study, was indicated in 50% to stabilize the improved functional and anatomical results.