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Abstract (poster session)

**Risk factors for retinal toxicity during pegylated interferon therapy**

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Ocular side effects such as retinal ischemia and hemorrhages were reported during pegylated interferon therapy for hepatitis C virus (HCV) infection. An ischemic substrate seems to be involved in the pathogenesis of retinal damage. Objective: to describe the risk factors for interferon related retinopathy, in patients with HCV infection. Methods: prospective observational study of patients receiving pegylated interferon for HCV hepatitis. Optic fundi were examined at the beginning of therapy and then monthly. Clinical and biological data were compared between the patients with and without retinopathy. Results: 26 of 178 patients developed retinopathy (14.6%), 23% in the first 3 months, 42.3% between 3 and 6 months and 34.61% after 6 months of therapy. Retinopathy was diagnosed by the presence of cotton wool spots on optic fundus. Retinal hemorrhages were observed in 2 patients. Ten patients complained of visual disturbance (2 patients with grade 3 side effects – 7.69% and 8 patients with grade 2 side effects-30.76%). There were no significant differences between the two groups regarding age (48.69 vs 46.94 year-old), gender (sex ratio female: male - 2.25:1 in retinopathy group and 1.92:1 in control group) and pretreatment changes of the optic fundi. Arterial hypertension and diabetes mellitus were more frequent in retinopathy group than in control (42.3% vs 25.65%,  $p=0.08$ , RR 1.65 (0.98; 2.78) for arterial hypertension and 38.46% vs 18.4%,  $p=0.02$ , RR 2.09 (1.16; 3.77) for diabetes mellitus). Hemoglobin level below 10g/dl was an important risk factor for retinopathy - 73.07% in retinopathy group vs 16.99% in control group –  $p<10^{-7}$ , RR 4.27 (2.81; 6.51). This could be probably due to the fact that anemia can increase the retinal blood flow which sharpens the wall shear stress. The autoimmune thyroiditis was reported more frequent in retinopathy group – 38.6% vs 15.13% in control group,  $p=0.005$ , RR 2.54 (1.37; 4.70). Retinopathy was solved in 25 patients. One patient developed severe type 1 diabetes mellitus with Vogt-Koyanagi-Harada disease. Conclusion: diabetes mellitus, hemoglobin level below 10g/dl and concomitance of autoimmune thyroiditis represent risk factors for interferon related retinopathy. "ACKNOWLEDGEMENT: POSDRU Project / 107/1.5/S/ 82839"