Pentadecapeptide BPC 157 Counteracts Hypertension and Compromised Optic Disc Circulation and Following Atrophy in Rats Subjected to High Fructose Diet

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INTRODUCTION We sought to determine whether stable gastric pentadecapeptide BPC 157 in rats subjected to a high fructose diet counteracts hypertension and compromised optic disc circulation and following atrophy. METHODS: Rats were put on a high fructose (80%) diet during a 1 month period. The treated group received BPC 157 in drinking water (10 ng/kg/rat/day). Their blood pressure was regularly measured, and they were subjected to ocular fundus examination. RESULTS At the end of the 1 month period, in control rats, with a mean blood pressure of 146 mmHg, we observed a pale optic disc with well-defined outer borders. In addition, the excavation noticed suggests compromised optic disc circulation and atrophy. Very thin arteries and thick hyperemic veins appeared, resulting in an arterial/vein diameter ratio of about 1/4. An abnormal red reflex and reduced brightness from the choroid suggests a decreased blood flow and choroidal blood filling. Contrarily, in the treated group of rats, who presented with a mean blood pressure of about 132 mmHg, all these changes were significantly attenuated. The optic disc appeared more vivid and healthier with less compromised circulation, and the arterial/vein diameter ratio was about 3/4. The choroid in rats drinking BPC 157 was brighter and with a more pronounced shade of red. CONCLUSION BPC 157 may be considered for treating hypertension, particularly when vascular obstruction is present.