Splenectomy induced portal and caval hypertension, aortic hypotension, venous thrombosis, peaked p waves, and tachycardia. therapy with pentadecapeptide BPC 157

Helena Žižek[a] , Slaven Gojković[a] , Zoya Jelovečki – Dokić[a], Oliver Marcel Koltay[a] , Marina Madunić[a], Tajana Đurašin[a], Mariam Samara[a]

[a] *University of Zagreb, School of Medicine, Department of Pharmacology*

Helena Žižek (0000-0001-9863-4164), Slaven Gojković (0000-0003-4020-326X), Zoya Jelovečki – Dokić (0000-0001-6758-4627), Oliver Marcel Koltay (0000-0003-3820-196X), Marina Madunić (0000-0001-9555-3895), Tajana Đurašin (0000-0002-6893-0875), Mariam Samara (0000-0003-2384-273X)

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We introduce BPC 157 therapy for a cluster of complications taking place after splenectomy in rats, including portal vein (PV), inferior vena cava (IVC), superior mesenteric vein (SMV) and lienal vein (LV) thrombosis, severe venous hypertension (PV, IVC), abdominal aorta (AA) hypotension, peaked P waves and tachycardia. Medication (/kg) (BPC 157 (10 μg)(treated group) or saline (5 ml)(control group)) was applied as an abdominal bath immediately after splenectomy. 10min, 3h, and 24h after splenectomy rats were assessed via electrocardiography, USB microcamera, intravascular cannulation, and thrombi extraction. Splenectomized rats exhibited PV and IVC hypertension, aortic hypotension (mmHg) (10min: 65±4 PV, 46±4 IVC, 71±3 AA; 3h: 42±4 PV, 61±4 IVC, 70±3 AA; 24h: 38±4 PV, 47±4 IVC, 68±3 AA) and thrombosis (thrombus weight, mg) (10min: 9.5±0.5 IVC, 6.6±0.9 PV, 4.8±0.9 SMV, 1.3±0.6 LV; 3h: 10.1±0.5 IVC, 5.3±0.8 PV, 19.2±0.9 SMV, 1.0±0.6 LV; 24h: 33.8±2.5 IVC, 27.5±2.9 PV, 8.8±0.9 SMV, 3.8±0.6 LV). BPC 157 normalised blood pressure (10min: 29±4 PV, 20±4 IVC, 87±3 AA; 3h: 20±4 PV, 17±4 IVC, 81±3 AA; 24h: 12±4 PV, 20±4 IVC, 82±3 AA) and reduced thrombosis (10min: 2.9±0.5 IVC, 2.6±0.9 PV, 3.2±0.3 SMV, 0.5±0.2 LV; 3h: 6.3±0.5 IVC, 2.3±0.5 PV, 5.9±0.9 SMV, 0.6±0.2 LV, 24h: 12.2±2.5 IVC, 1.9±0.5 PV, 4.8±0.9 SMV, 2.0±0.6 LV). Control group presented with peaked P waves, tachycardia and PV/SMV congestion, whereas the treated group showed none of the aforementioned phenomena. BPC 157 therapy counteracts hemodynamic disturbances, peaked P waves, and tachycardia as post-splenectomy complications.