BS03

Effects of Pentadecapeptide BPC 157 on Ulcer, Intracranial, Portal and Caval Hypertension and Aortal Hypotension after Stomach Perforation

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DOI: https://doi.org/10.26800/LV-144-supl2-BS03

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Keywords: BPC 157, hypertension, pharmacology, stomach perforation

INTRODUCTION/OBJECTIVES: INTRODUCTION: We report that rat stomach perforation (surgery with 5-mm diameter metal needle on the ventral side in the prepyloric area) induced a defect that would not heal. Stomach perforation rapidly induced the hypertension in superior sagittal sinus, portal and caval hypertension and aortal hypotension. Previously, stable gastric pentadecapeptide BPC 157 largely diminished or even eliminated the consequences of Budd-Chiari syndrome in rats (portal and caval hypertension and aortal hypotension). Now, we will examine of BPC 157 on Ulcer and blood pressures in vessels after Stomach Perforation.
MATERIALS AND METHODS: MATERIALS AND METHODS: rats were anesthetized, laparotomy and stomach perforation were performed. Animals were divided into treated and control groups. Treated rats received BPC 157 treatment (10 µg /kg, 10 ng /kg 1mL) intragastrically at 1 min after stomach perforation and rats in control group received 1mL saline. At 5 min after stomach perforation, recordings of the blood pressure were made in anesthetized and laparatomized rats. We recorded pressures in sinus sagittalis superior, portal vein, inferior vena cava and abdominal aorta pressure.
RESULTS: RESULTS: Without therapy, in control groups, intracranial hypertension, portal and caval hypertension and aortal hypotension occurred rapidly. Both BPC 157 regimens counteracted intracranial hypertension, portal and caval hypertension and aortal hypotension. Finally, BPC 157 completely healed stomach defect.
CONCLUSION: CONCLUSION: BPC 157 showed anti-ulcer effect and also opposed the intracranial hypertension, portal and caval hypertension and aortal hypotension in groups of treated animals.

BS04

Histological Aspect of Pentadecapeptide BPC 157 Therapeutic Effects on Early and Definitive Spinal Cord Injury

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DOI: https://doi.org/10.26800/LV-144-supl2-BS04

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Keywords: BPC 157, pharmacology, spinal cord injury

INTRODUCTION/OBJECTIVES: This study aimed to show an immediate effect on the histological level of the stable gastric pentadecapeptide BPC 157 therapy which was applied in rats with acute spinal cord injury as well as in the rats with definitive spinal cord injury.
MATERIALS AND METHODS: A compressive injury was made with a neurosurgical piston in Wistar rats subjected to laminectomy at lumbar level L2-L3. Injection of either saline (1mL) or BPC 157 (2 µg/kg 1mL) was intraperitoneally administered at 10 minutes post-injury (acute injury) or 4 days post-injury (definite injury). Animals were sacrificed 20 minutes after treatment. A 10-mm long piece of the spinal column was collected from each sacrificed animal and fixed, decalcinated, and embedded in paraffin. Serial cross-sections were stained with haematoxylin/eosin and toluidine blue. Samples were analysed under light microscopy. Pathological changes were scored appropriately.
RESULTS: At 10 minutes after injury, a haemorrhagic zone is present over grey and white matter. 20 minutes after saline administration (30 minutes post-injury) massive haemorrhage and oedema are present in the control group. Contrary, BPC 157 treated group have discrete oedema and minimal haemorrhage. On day 4, there is a large haemorrhagic zone, massive oedema, and vacuolation of tissue matter in control rats. Contrarily, in BPC 157 rats there is only mild haemorrhage and discrete vacuolation of tissue matter.
CONCLUSION: BPC 157, applied early as well as postponed, has a beneficial effect in the recovery of spinal cord injury. Histologically seen, it reduces haemorrhage, oedema, and vacuolation of tissue matter.