



## An investigation of SP, VIP, cGRP levels in gastric antrum of experiment spleen deficiency rats

Su-Mei Liu, Rui-Yao Qu, Wei Wang, Wen-Hong Zeng, Bai-Lin Qu, Xiu-Qin Wang, Xiao-Bei Zeng, Hong-Wei Shang

Su-Mei Liu, Rui-Yao Qu, Wei Wang, Wen-Hong Zeng, Bai-Lin Qu, Department of Physiology, Capital University of Medical Sciences, Beijing 100054, China

Xiu-Qin Wang, Xiao-Bei Zeng, Hong-Wei Shang, Department of Histology and Embryology, Capital University of Medical Sciences, Beijing 100054, China

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### Abstract

**AIM:** Substance P (SP), vasoactive intestinal peptide (VIP) and calcitonin gene related peptide (cGRP) levels in all layers of gastric antrum in experimental spleen deficiency (SD) rats were measured by radioimmunoassays (RIA) in order to study the potential role of some gastrointestinal peptides in the gastrointestinal motility disorders presented in SD.

**METHODS:** 24 adult Wistar rats were used and divided into 4 groups, *i.e.* control group ( $n = 5$ ), experimental SD group ( $n = 8$ ), spontaneous recovery group ( $n = 5$ ) and therapeutic group ( $n = 5$ )

treated with Chinese herbs (sijunzi tang). A small piece of gastric antrum tissue including all layers was removed and processed for RIA.

**RESULTS:** The results showed that: The ir-SP, ir-VIP, ir-cGRP levels in gastric antrum of SD rats were significantly lower than that of control. In spontaneous recovery cases, ir-SP level was still less than that of control,  $P < 0.05$  while ir-VIP, ir-cGRP levels recovered (*vs* control,  $P < 0.05$ ). ir-VIP, ir-cGRP were improved to the levels of control group ( $P > 0.05$ ).

**CONCLUSION:** Our study suggested that there were significant changes of SP, VIP, cGRP levels in gastric antrum of SD rats. These changes may be closely related to the gastrointestinal motility disorders presented in SD. The Chinese herbs (Sijunzi tang) currently used have partially therapeutic effect. However it still needs to be studied whether this Chinese medicine could completely improve the SD syndrome.

**Key words:** Substance P; Vasoactive intestinal peptide; calcitonin gene related peptide levels; Gastric antrum; Experiment spleen deficiency

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