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OC23

Role of Vagal Afferents on High Fat Diet-induced Alterations in Rat Behaviour and Gut Motility

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AIM: High fat diet (HFD) affects emotion and cognitive functions, changes intestinal motility in rats with undetermined pathways. Vagus nerve and relaxin (Rln-3) can be mediators. Aim of the study is to understand If there is any role of vagal afferent nerves on HFD induced alterations and on distrubition of Rln-3 expression.
METHODS: Male Sprague-Dawley rats (n=38) were treated with either perivagal 1% capsaicin (n=19) or vehicle solution (n=19). After 3 weeks of recovery, rats were pair-fed with chow (n=18) or HFD (% 45 fat) (n=20) for 5 weeks. In between 4-5. weeks of HFD rats were subjected to elevated plus maze, open field, novel object recognition, passive avoidance tests. Food and water intake, weight of feces and transit time were measured. Rln-3 expression in brain stem, prefrontal cortex and hypothalamus was assessed with quantitative PCR. Data was analysed with two way ANOVA
RESULTS: VAD increased body weight ($p < 0,05$) irrespective of diet type in between 3-7. weeks. Fat content and VAD had no effect on food intake after deprivation. HFD decreased water intake ($p<0,0075$), VAD blunted this effect ($p<0,05$). Both HFD and VAD decreased faeces weight ($p < 0,0001$, $p<0,05$) but didn't change intestinal transit. HFD($p<0,02$), and VAD($p<0,04$) impaired memory. HFD rats were less anxious ($p < 0,01$). Rln-3 expression in hypothalamus and hippocampus of HFD group was respectively 1.71; 1,54 times more compared with chow group in sham operated rats and respectively 0,73; 0,7 times more in vagal afferent denervated rats.
CONCLUSION: Vagal afferents have no effect on HFD induced alternations, except water intake. However, vagal afferents have effects on memory, weight gain and colon motility unrelated with diet type. Rln-3 may have a role in mechanism of action of Vagal afferents. The modulation of vagal afferent activity can be a treatment of choice for behavioural and metabolic disorders.

OC24

Expression Levels of Micrornas Related to Autophaphy Pathway in Tumor and Adjacent Normal Tissues of Colorectal Cancer Patients

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AIM: Autophagy means self (auto) eating (phagy) and shows tumor suppressor effect during cancer development, while it contributes to survive of cancer cells during cancer progression. Micrornas (mirnas) are endogenous non-protein coding, single stranded rna of 18-24 nucleotide length that negatively modulate gene expression by binding to the 3'-utr of mrna. mirnas act as an oncogenic or tumor suppressor according to their role in the molecular pathways of their's target mrna. Tthe mir-17-5p, mir-30b, mir-30d, mir-216a and mir-216b are mirna that play role on autophagy process. The purpose of the present study was to investigate whether these mirnas play a role as tumor suppressor or oncogenic in colorectal cancer.
METHODS: A total of 47 (20 female/27 male) colorectal cancer patients with an average age of 57.31 ±21.56 were included in this study and the tumor tissue and adjacent normal tissue were collected from these patients during the surgical operation. mir-17- 5p, mir-30b, mir-30d, mir-216a and mir-216b expression levels were detected by quantitative real-time pcr in the tumor and adjacent normal tissues of colorectal cancer patients.
RESULTS: According to the results of our study, it was found that expression levels of mir-17-5p increased 2.78-fold ($p=0.001$), mir-30d increased 4.04-fold ($p=0.001$), and mir-216b increased 1.68-fold in the tumor tissues compared with normal tissues of patients.Furthermore, expression levels of mir-30b and mir-216a in these tumor tissues were found to be decreased 2.94 fold ($p=0.001$) and 4.32 fold ($p=0.001$), respectively.
CONCLUSION:Our results suggested that mir-17-5p, mir-30d and mir-216a may play a role as oncogenic mirnas in colorectal cancer, while mir-30b may play a role as tumor suppressor mirna.
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