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# Changes of neuropeptides in the sigmoid colonic wall in patients with slow transit constipatio and their clinical significance

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**Abstract** Objective: To investigate the changes of neuropeptides in the sigmoid wall in patients with slow transit constipation (STC) and their clinical significance. Methods: Using semi-quantitative immunohistochemistry, the levels of the neuropeptides in sigmoid colon specimens extracted from 14 patients with STC were examined. Meanwhile, those in the sigmoid colon specimens extracted from 11 patients with nonobstructed rectal adenocarcinoma (NRA) were examined likewise to serve as the control. Results: The mean contents of vasoactive intestinal peptide (VIP) and substance P (SP) were significantly lower in the myenteric plexus of the spemimens from the patients with STC than in those from the patients with NRA ($P < 0.01$). No significant changes were found in the mucous layer. Conclusion: The slow transmittion in patients with STC might resulted from the decrease of VIP and SP in the myenteric plexus in the rectal wall.

**Key words** slow transit constipation (STC); signoid colon; vasoactive intestinal peptide; substance P; immunohistochemistry

# 卡介苗膀胱灌注后尿中 IL-2 sIL-2 TNF含量变化

# Changes of IL-2 sIL-2R TNF in urine of patients with superficial bladder cancer after intravesical BCG instillation

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自1976年以来,卡介苗(BCG)广泛应用于临床,被认为是最有效的腔内制剂之一[1,2]。但是BCG的抗肿瘤作用机理仍不十分清楚,为此,我们进行了前瞻性研究,报告如下。

## 1 材料与方法

27例表浅膀胱癌患者,男20例,女7例;年龄28~72岁,平均58.5岁。膀胱部分切除18例,经尿道电切9例。病理证实均为膀胱移行细胞癌,其中Ⅰ级9例,Ⅱ级16例,Ⅲ级2例。术后7~14 d开始BCG膀胱灌注,BCG 120 mg,溶于50 ml生理盐水中,经导尿管注入膀胱,保留2 h后排出。每周一次,6次为一疗程。分别于灌注前、第六次灌注后4 h收集尿液,按Bohle[3]的方法处理尿液标本,低温保存待测。

采用CTLL-$^3$H-TdR掺入法测定白细胞介素Ⅱ(IL-2)的活性,结果以活性单位(U/ml)表示;采用夹心法酶联免疫吸附试验分别测定肿瘤坏死因子(TNF)和可溶性白细胞介素Ⅱ受体(sIL-2R)含量,均以ng/L为单位。测定结果以$\bar{x}\pm s$表示。灌注前、后尿液中IL-2、sIL-2R、TNF变化采用配对$t$检验。

## 2 结果

灌注前尿液中IL-2、SIL-2R、TNF含量分别为3.42±1.63 U/ml、18.34±7.63 ng/L、19.73±8.62 ng/L,灌注后含量分别为20.67±8.31 U/ml、27.33±11.43 ng/L、89.4±41.62 ng/L,灌注后较灌注前均有显著性升高($P<0.01$或$P<0.05$)。

## 3 讨论

IL-2是T细胞在特殊抗原刺激下而分泌的一种细胞因子,它激活自然杀伤细胞、巨噬细胞、细胞毒T淋巴细胞,并加强T细胞介导的免疫反应[3]。sIL-2R是膜性IL-2R在酶的作用下脱落形成。IL-2R是T辅助细胞(TH)活化的重要标志,IL-2与IL-2R结合后,刺激TH大量增殖,分泌更多的细胞因子,共同产生免疫放大效应。TNF是T细胞和巨噬细胞分泌的一种细胞因子,它能刺激T细胞和巨噬细胞增殖,并且有较强的抗肿瘤活性[3]。本实验结果表明:BCG膀胱灌注后,迅速引起膀胱壁局部免疫反应,膀胱壁免疫细胞不断增殖活化并分泌大量的IL-2、TNF等细胞因子,达到抗肿瘤的目的。

关键词 膀胱肿瘤;癌;免疫

中图法分类号 R69

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