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研究报告

宫颈癌患者血浆和组织中*FHIT*基因5′端CpG岛甲基化状态的研究

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摘要 为了检测宫颈癌患者血浆和组织中*FHIT*基因5′端CpG岛甲基化状态, 以找到无创伤性诊断宫颈癌的新指标, 选取151例宫颈癌患者的血浆和30例患者的宫颈癌组织为研究对象,用MSP的方法检测*FHIT*基因5′端CpG岛甲基化状态, 并对MSP产物进行克隆和测序。结果在宫颈癌患者血浆和组织中, *FHIT*基因5′端CpG岛甲基化率为30.46%和53.33%, 血浆和组织的总体符合率为80%。而对照中均未检测到甲基化状态。随着患者临床分期和组织学分级的增加, *FHIT*基因甲基化的检出率也在逐渐的增加。表明宫颈癌患者的血浆和肿瘤组织中*FHIT*基因5′端CpG岛甲基化的发生是高频事件, 使用*FHIT*基因作为标记可以对宫颈癌患者进行无创伤诊断和预后的评估。

关键词 宫颈癌 甲基化状态 FHIT基因 血浆 组织

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Methylation Status of the 5′ CpG Islands in *FHIT* Gene in the Plasma and Tissues of Cervical Cancer Patients

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Abstract

To evaluate the methylation status of the 5′ CpG islands in <EM>FHIT</EM> gene using plasma and tissue samples from cervical cancer patients and find a novel marker for non-invasive diagnosis of cervical cancer, methylation-specific PCR (MSP) was employed to examine CpG island methylation in <EM>FHIT</EM> gene in 151 pretreatment plasma samples and 30 tumor tissue samples obtained from cervical cancer patients. MSP product was cloned and sequenced directly. CpG island methylation of <EM>FHIT</EM> was detected in 31.13% of the plasma samples, and in 53.33% of the tissue samples. The total concordant rate of methylation status between plasma and tissue samples in <EM>FHIT</EM> gene was 80.00%. We found a strong positive correlation between <EM>FHIT</EM> methylation in the plasma and the clinical stage and histological grade of the tumor. The data showed that CpG island methylation of the <EM>FHIT</EM> gene is prevalent in the plasma and tissue samples from cervical cancer patients. <EM>FHIT</EM> detection may be used as a non-invasive marker for diagnosis of cervical cancer and prognostic treatment evaluation.

Key words cervical cancer methylation status FHIT gene plasma tissue

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