

## 转化生长因子 在胃癌细胞内的表达

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目的:观察胃癌细胞内转化生长因子(TGF)的表达情况,探讨胃癌发展过程中TGF的可能作用。方法:42例经胃镜活检、病理检查证实为胃癌。44例浅表性胃炎的活检组织,采用免疫细胞化学方法—SP法显示TGF<sub>1</sub>及<sub>2</sub>,其表达强度采用等级表示(由弱到强依次为-、±、+、++、+++)。结果:在42例胃癌患者,TGF<sub>1</sub>无1例强阳性(+++),中度阳性(++)1例,低度阳性(+)10例,可疑阳性(±)3例,阴性(-)28例,阳性率为26.2%。TGF<sub>2</sub>强阳性(+++)5例,中度阳性(++)16例,低度阳性(+)13例,可疑阳性(±)2例,阴性(-)6例;阳性率为81.0%。44例浅表性胃炎患者,TGF<sub>1</sub>无1例阳性(+~+++),可疑阳性(±)4例,阴性(-)40例。TGF<sub>2</sub>无1例中度阳性及强阳性(++~+++),低度阳性(+)10例,可疑阳性(±)1例,阴性(-)33例;阳性率为22.7%。胃癌患者的TGF<sub>1</sub>、<sub>2</sub>阳性率均明显高于浅表性胃炎,TGF<sub>2</sub>的阳性率在胃癌更高于TGF<sub>1</sub>。结论:TGF<sub>1</sub>,尤其是TGF<sub>2</sub>表达的增强是胃癌恶性演变的一个标志。

关键词 胃癌 转化生长因子  
分类号 R735.2

转化生长因子(TGF)对正常上皮细胞发挥着普遍的生长抑制作用,但在胃癌的发生发展过程中,TGF的表达和作用如何,目前尚未十分明了。近有观点认为<sup>[1,3]</sup>,TGF<sub>1</sub>不仅不抑制癌细胞的生长,甚至刺激癌细胞的生长。为进一步明确TGF在胃癌发展中的作用,我们采用胃癌活检组织,观察了TGF家庭中<sub>1</sub>和<sub>2</sub>在胃癌细胞内的表达。

### 1 材料和方法

#### 1.1 标本

42例均经胃镜活检、病理证实确诊为胃癌的患者,男性20例,女性22例,平均年龄(49.9±13.5)岁,其中年龄最大72岁,最小26岁。胃癌的病理组织学类型中,低分化腺癌28例(66.7%),印戒细胞癌5例(11.9%),中、高分化腺癌3例(7.1%),高分化腺癌2例(4.8%),低、未分化腺癌1例(2.4%),未分化腺癌1例(2.4%),中、低分化腺癌1例(2.4%),中、中分化腺癌1例(2.4%)。同时,还收集了44例浅表性胃炎的活检组织,均按常规制作成石蜡包埋块。

#### 1.2 试剂

抗TGF<sub>1</sub>和TGF<sub>2</sub>武汉博士德公司生产;SP试剂盒系福州迈新生物技术公司生产。

#### 1.3 方法

1.3.1 具体步骤按SP法进行。

1.3.2 对照 用缓冲液代替一抗作空白对照;以试剂盒所附阳性片作阳性对照。

1.3.3 TGF阳性强度评估 根据切片中着色深浅半定量分级:- (阴性),±(可疑),+(弱阳性),++(阳性),+++ (强阳性)。

#### 1.4 资料记录和处理

所有科研资料录入电脑的Office 97 Excel中,利用Excel 97分析和处理资料。差异显著性采用卡方检验。

### 2 结果

#### 2.1 胃癌与浅表性胃炎组织内TGF的表达

TGF的阳性产物为棕黄色,分布于细胞质,见图1。在42例胃癌患者,TGF<sub>1</sub>无1例强阳性(+++),中度阳性(++)1例,低度阳性(+)10例,可疑阳性(±)3例,阴性(-)28例;阳性率为26.2%。TGF<sub>2</sub>强阳性(+++)5例,中度阳性(++)16例,低度阳性(+)13例,可疑阳性(±)2例,阴性(-)6例;阳性率为81.0%。44例浅表性胃炎患者,TGF<sub>1</sub>无1例阳性(+~+++),可疑阳性(±)4例,阴性(-)40例。TGF<sub>2</sub>无1例中度阳性及强阳性(++~+++),低度阳性(+)10例,可疑阳性(±)1例,阴性(-)33例;阳性率为22.7%。

见附表。

附表 胃癌与浅表性胃炎的 TGF 的表达情况

		表达强度					阳性率 (%)
		-	±	+	++	+++	
胃癌	TGF <sub>1</sub>	28	3	10	1	0	26.2
	TGF <sub>2</sub>	6	2	13	16	5	81.0
浅表性胃炎	TGF <sub>1</sub>	40	4	0	0	0	0.0
	TGF <sub>2</sub>	33	1	10	0	0	22.7



图 1 胃癌细胞 TGF<sub>2</sub> SP 法 ×400

### 2.2 胃癌与浅表性胃炎患者 TGF 阳性率比较

经卡方检验,42 例胃癌患者 TGF<sub>1</sub>、TGF<sub>2</sub> 阳性率分别与 44 例浅表性胃炎患者 TGF<sub>1</sub>、TGF<sub>2</sub> 阳性率相比较,差异有高度显著性,胃癌患者的 TGF<sub>2</sub> 阳性率比 TGF<sub>1</sub> 更高,见图 2。

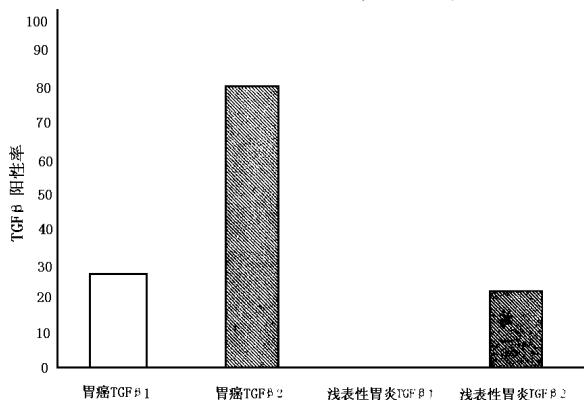


图 2 胃癌与浅表性胃炎患者 TGF 阳性率比较

## 3 讨论

TGF 存在于大多数正常组织及细胞内以及损伤修复、炎症反应的局部区域,其主要的生物学作用是刺激成纤维细胞和基质细胞合成胶原纤维连接蛋白及蛋白多糖等细胞外基质,阻止已合成的基质降解,对单核细胞、巨噬细胞有趋化作用。对上皮细胞

而言,TGF 通常发挥着普遍的生长抑制效应,但有部分研究者认为<sup>[1,3]</sup>,在结直肠癌、胃癌等某些肿瘤,在其发生发展过程中,可摆脱 TGF<sub>1</sub> 的抑制甚至被 TGF<sub>1</sub> 刺激而生长。

本文采用免疫细胞化学方法,观察了胃癌活检标本癌细胞内 TGF<sub>1</sub>、TGF<sub>2</sub> 的表达。结果表明,在 42 例胃癌患者,两类 TGF 表达的强度及阳性率均有提高,尤其是 TGF<sub>2</sub> 的表达更是明显。胃癌细胞具有表达 TGF<sub>1</sub> 的功能已见于文献<sup>[3,4]</sup>,本文显示了胃癌细胞表达 TGF<sub>2</sub> 的功能更为突出。

在胃癌发生以后,TGF 表达增强的生物学意义可能并非在于刺激癌细胞的生长。首先,目前并无直接证据表明 TGF 刺激胃癌细胞生长;再者,已有实验证据表明,TGF<sub>R</sub>(TGF 受体)基因在胃癌细胞发生了突变<sup>[3,5,6]</sup>,受体的减少与 TGF<sub>1</sub> 的升高呈负相关,因此,TGF 在胃癌细胞内的升高很有可能只与胃癌的恶性演变相伴随,仅仅是胃癌不良预后的一个标志,这与 Robson<sup>[2]</sup>等将 TGF<sub>1</sub> 的表达作为结直肠肿瘤预后不良的标志相一致。有关 TGF<sub>2</sub> 与 TGF<sub>R</sub> 在胃癌恶化中的关系值得研究。

总之,本文结果显示,在胃癌细胞内 TGF<sub>1</sub> 和 TGF<sub>2</sub> 表达增强,胃癌患者的阳性率明显升高,尤以 TGF<sub>2</sub> 更明显,并推测 TGF 表达的增强可作为胃癌恶性演变的一个标志。

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## TRANSFORMING GROWTH FACTOR EXPRESSION IN THE GASTRIC CANCER CELLS

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Taking immunological cytochemical method ,transforming growth factor (TGF)<sub>1</sub> and <sub>2</sub> expression in the gastric cancer cells were observed among 42 cases. The results showed that TGF<sub>1</sub> and <sub>2</sub> expression was intensified ,especially TGF<sub>2</sub>. The positive rates of TGF<sub>1</sub> and <sub>2</sub> was 26.2% and 81.0% respectively among 42 cases ,being obviously higher as comparing with 0.0% and 22.7% of total positive rate in superficial gastritis among 44 cases. This paper speculated that the increase of TGF<sub>1</sub> and <sub>2</sub> expression in the gastric cancer cell may be an independent cellular marker in gastric cancer evolvement.

**Key words :** Gastric cancer ; Transforming growth factor

## THE VALUE OF INTRAOPERATIVE CHOLEDOCHOSCOPY IN BILIARY TRACT DISEASE AND THE TREATMENT OF PROBLEM ON OPERATING

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Since 1978 ,284 cases were performed intraoperative choledochoscopy ,57 of 284 cases were diagnosed by intraoperative choledochoscopy and cooperated pathological diagnosis so that preoperative diagnosis was corrected and supplied. The corresponding surgical operation were also taken. The intraoperative choledochoscopy may provide selection for operative way on hepatolithiasis. If apparatus were coordinated in operating ,the rate of remain cholelithiasis may decrease to 5.4%. The difficulty of intraoperative choledochoscopy in surgical operation were sampling in pathologic change location with biopsy forceps. It is necessary to simple with apparatus ,according to appearance of pathologic location carry on analysis and diagnosis. Because of the affection limit of operative time ,cholangitis ,hyperemia hydrops and floccule on visual field of choledochoscopy and existence of bile duct stricture ,there is 5.4% existence of remains gallstone after cholelithotomy in surgical operation.

**Key words :** Intraoperative choledochoscopy ;Bile duct obstructions ;Cholelithiasis

## THE APPLICATION OF LAPAROSCOPIC IN THE REMOVAL OF PELVIC TUMOUR

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**Objective :** To explore the feasibility and superiority of the removal of pelvic tumour by laparoscopy. **Methods :** To compare effects , intra - operative findings. and postoperative recovery of removal of pelvic tumour by laparoscopy (72 cases) with those by exploratory