· 论著 ·

肝血管瘤患者手术治疗后生存质量评价

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【摘要】 目的　评价肝血管瘤患者手术治疗后生存质量。**方法**　采用回顾性描述性研究方法。收集 2011 年 9 月至 2017 年 2 月中国医科大学附属盛京医院收治的 104 例行手术治疗肝血管瘤患者的临床资料；男 28 例，女 76 例；年龄为（49±8）岁，年龄范围为 27～78 岁。根据患者肿瘤位置情况行肝血管瘤剥除术或肝切除术。观察指标：（1）手术及术后情况。（2）患者生存质量评价情况。（3）合并其他消化道慢性疾病患者生存质量情况。正态分布的计量资料以 $\bar{x}\pm s$ 表示，偏态分布的计量资料以 M（范围）表示。重复测量的计量资料采用重复测量方差分析，组间比较采用 t 检验。计数资料以绝对数表示。**结果**　（1）手术及术后情况：104 例患者中，67 例行肝血管瘤剥除术，37 例行肝切除术。104 例患者肿瘤直径为（10±4）cm，术中出血量为 200 mL（10～3 000 mL），术后住院时间为（11±5）d。7 例患者术后发生并发症，其中腹腔大量积液 5 例、腹腔感染 1 例、肺梗塞 1 例，无死亡病例。（2）患者生存质量评价情况：104 例肝血管瘤患者术前《消化道相关生存质量指数量表》（GIQLI）总分、主观症状、生理状态、精神心理和社会活动评分分别为（121.0±8.3）分、（69.2±4.1）分、（18.5±2.6）分、（19.5±1.8）分和（13.8±1.4）分。术后 1 个月，104 例肝血管瘤患者上述指标分别为（121.9±6.9）分、（71.2±3.8）分、（17.2±2.5）、（19.6±2.3）分和（13.8±1.3）分。术后 6 个月，104 例肝血管瘤患者上述指标分别为（127.8±6.2）分、（73.2±3.6）分、（19.8±2.5）分、（20.8±2.4）分和（14.1±1.0）分。上述指标比较均有统计学意义（F=68.4，64.6，71.4，17.8，3.3，P<0.05）。术后 1 个月与术前比较，主观症状、生理状态评分差异均有统计学意义（t=−5.780，6.640，P<0.05），GIQLI 总分、精神心理和社会活动评分比较，差异均无统计学意义（t=−1.569，−0.705，0.240，P>0.05）。术后 6 个月与术前比较，GIQLI 总分、主观症状、生理状态、精神心理评分差异均有统计学意义（t=−8.897，−9.919，−5.375，−5.024，P<0.05），社会活动评分差异无统计学意义（t=−1.919，P>0.05）。术后 6 个月与术后 1 个月比较，GIQLI 总分、主观症状、生理状态、精神心理和社会活动评分差异均有统计学意义（t=−10.835，−6.787，−12.277，−4.560，−2.476，P<0.05）。（3）合并其他消化道慢性疾病患者生存质量情况：104 例患者中，29 例合并慢性胃炎、胆道系统疾病、阑尾炎等。29 例患者术前 GIQLI 总分、主观症状、生理状态、精神心理和社会活动评分分别为（117.5±7.5）分、（67.8±4.2）分、（17.4±2.2）分、（19.0±1.5）分和（13.2±1.3）分。术后 1 个月，29 例合并其他消化道慢性疾病患者上述指标分别为（118.7±6.9）分、（69.5±4.5）分、（16.7±2.0）、（19.2±1.9）分和（13.2±1.3）分。术后 6 个月，29 例合并其他消化道慢性疾病患者上述指标分别为（124.6±6.5）分、（70.9±4.5）分、（19.8±2.1）分、（19.9±2.4）分和（14.0±0.9）分。GIQLI 总分、主观症状、生理状态和社会活动评分变化均有统计学意义（F=15.0，9.0，27.6，7.5，P<0.05），精神心理评分比较，差异无统计学意义（F=1.6，P>0.05）。术后 1 个月与术前比较，主观症状、生理状态评分差异均有统计学意义（t=−2.612，2.191，P<0.05），GIQLI 总分、精神心理和社会活动评分差异均无统计学意义（t=−1.128，−0.587，−0.157，P>0.05）。术后 6 个月与术前比较，GIQLI 总分、主观症状、生理状态、社会活动评分差异均有统计学意义（t=−4.002，−3.441，−4.604，−3.266，P<0.05），精神心理评分差异无统计学意义（t=−1.522，P>0.05）。术后 6 个月与术后 1 个月比较，GIQLI 总分、主观症状、生理状态和社会活动评分差异均有统计学意义（t=−4.819，−2.313，−7.081，−3.172，P<0.05），精神心理评分差异无统计学意义（t=−1.154，P>0.05）。**结论**　手术治疗可提高肝血管瘤患者生存质量。术前合并消化道慢性疾病肝血管瘤患者，手术治疗可改善 GIQLI 总分、主观症状、生理状态和社会活动。

【关键词】 肝血管瘤；　手术；　肝血管瘤剥除术；　肝切除术；　生存质量
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Assessment of quality of life after surgery for patients with hepatic hemangioma

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【**Abstract**】 **Objective** To evaluate the postoperative quality of life after surgery of patients with hepatic hemangioma. **Methods** The retrospective and descriptive study was conducted. The clinical data of 104 patients who underwent surgery for hepatic hemangioma at Shengjing Hospital of China Medical University from September 2011 to February 2017 were collected. There were 28 males and 76 females, aged (49±8) years, with a range of 27-78 years. Enucleation of hepatic hemangioma or hepatectomy was selected according to tumor location of patients. Observation indicators: (1) surgical and postoperative situations; (2) assessment of quality of life in patients; (3) assessment of quality of life in patients comorbid with other chronic digestive diseases. Measurement data with normal distribution were represented as *Mean*±*SD*, and measurement data with skewed distribution were represented as *M* (range). Repeated data were analyzed using repeated ANOVA. Count data were represented as absolute numbers. **Results** (1) Surgical and postoperative situations: of 104 patients, 67 underwent enucleation of hepatic hemangioma, 37 underwent hepatectomy. The tumor diameter, volume of intraoperative blood loss, duration of postoperative hospital stay were (10±4) cm, 200 mL (range, 10-3 000 mL), (11±5) days. Seven patients had complications, including 5 of massive abdominal ascites, 1 of abdominal infection, and 1 of pulmanory obstruction. There was no death occurred. (2) Assessment of quality of life in patients with hepatic hemangioma: the total scores of Gastrointestinal-related Quality of Life Index (GIQLI), the scores of subjective symptoms, physiological status, mental and psychological status, and social activities were 121.0±8.3, 69.2±4.1, 18.5±2.6, 19.5±1.8, and 13.8±1.4 at preoperation. The above indices were 121.9±6.9, 71.2±3.8, 17.2±2.5, 19.6±2.3, and 13.8±1.3 of 104 patients with hepatic hemangioma at one month after surgery, respectively. The above indices were 127.8±6.2, 73.2±3.6, 19.8±2.5, 20.8±2.4, and 14.1±1.0 at 6 months after surgery. There were significant differences in changing trends of above indices (F=68.4, 64.6, 71.4, 17.8, 3.3, P<0.05). The scores of subjective symptoms and physiological status at one month after surgery showed significant differences compared with those of preoperation (t=-5.780, 6.640, P<0.05), but the total scores of GIQLI, the scores of mental and psychological status, and social activities showed no difference (t=-1.569, -0.705, 0.240, P>0.05). The total scores of GIQLI, scores of subjective symptoms, physiological status, and mental and psychological status at 6 months after surgery showed significant differences compared with those of preoperation (t=-8.897, -9.919, -5.375, -5.024, P<0.05), but the score of social activities showed no difference (t=-1.919, P>0.05). The total scores of GIQLI, the scores of subjective symptoms, physiological status, mental and psychological status, and social activities at 6 months after surgery were significantly different from those at one month after surgery (t=-10.835, -6.787, -12.277, -4.560, -2.476, P<0.05). (3) Assessment of quality of life in hepatic hemangioma patients comorbid with other chronic digestive diseases: 29 of 104 patients were comorbid with chronic gastritis, biliary diseases, and appendicitis. For the 29 patients comorbid with other chronic digestive diseases, the total scores of GIQLI, the scores of subjective symptoms, physiological status, mental and psychological status, and social activities were 117.5±7.5, 67.8±4.2, 17.4±2.2, 19.0±1.5, and 13.2±1.3 at preoperation. The above indices were 118.7±6.9, 69.5±4.5, 16.7±2.0, 19.2±1.9, and 13.2±1.3 at one month after surgery, respectively. The above indices were 124.6±6.5, 70.9±4.5, 19.8±2.1, 19.9±2.4, and 14.0±0.9 of 29 patients comorbid with other chronic digestive diseases at 6 months after surgery. There were significant differences in changing of the total scores of GIQLI, the scores of subjective symptoms, physiological status, and social activities (F=15.0, 9.0, 27.6, 7.5, P<0.05), except the score of mental and psychological status (F=1.6, P>0.05). The scores of subjective symptoms and physiological status at one month after surgery showed significant differences compared with those of preoperation (t=-2.612, 2.191, P<0.05), but the total scores of GIQLI, the scores of mental and psychological status, and social activities showed no difference (t=-1.128, -0.587, -0.157, P>0.05). The total scores of GIQLI, scores of subjective symptoms, physiological status, and social activities at 6 months after surgery showed significant differences compared with those of preoperation (t=-4.002, -3.441, -4.604, -3.266, P<0.05), but the score of mental and psychologica status showed no difference (t=-1.522, P>0.05). The total scores of GIQLI, the scores of subjective symptoms, physiological status, and social activities at 6 months after surgery were significantly different from those at one month after surgery (t=-4.819, -2.313, -7.081, -3.172, P<0.05), but the score of mental and psychological status had no significant difference (t=-1.154, P>0.05). **Conclusions** The quality of life in patients with hepatic hemangioma can be improved by surgery. Surgical treatment is still effective for improvement of the total scores of GIQLI, the scores of subjective symptoms, physiological status, and social activities for those combined with other digestive diseases.

【Key words】 Hepatic hemangioma; Surgery; Enucleation of hepatic hemangioma; Hepatectomy; Quality of life

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肝血管瘤是一种常见的肝脏良性肿瘤,发病率为5.0%~20.0%,尸检检出率约为7.3%[1-9]。目前外科手术依然是肝血管瘤首选的治疗方法,但是对于肝血管瘤的手术指征仍争议不断[10-11]。国内外外科专家多数已摒弃将肿瘤直径作为手术指征,而把明显的临床症状作为手术适应证之一,另有少量学者将心理因素也列入手术指征范畴[12-16]。有专家提出:经手术治疗的患者中有些症状仍存在,甚至有些患者术后有新发症状,因此,以解除症状为目的的手术疗效有待考证[17-19]。近年来,在生物-心理-社会的新医学模式下,WHO 引入生存质量的概念,其综合生理、心理、社会、精神多个维度评价指标,更加全面反映患者健康状况与临床疗效[20]。针对肝血管瘤患者术后症状改善情况、精神焦虑缓解情况出现的争议,本研究回顾性分析 2011 年 9 月至 2017 年 2 月我科收治的 104 例肝血管瘤患者的临床资料,评价肝血管瘤手术治疗后生存质量。

1　资料与方法

1.1　一般资料

采用回顾性描述性研究方法。收集 104 例行手术治疗肝血管瘤患者的临床资料,男 28 例,女 76 例;年龄为(49±8)岁,年龄范围为 27~78 岁。104 例患者中,肝血管瘤单发 61 例,多发 43 例;肿瘤位于肝左叶 44 例,位于肝右叶 60 例。本研究符合《赫尔辛基宣言》的要求。患者及家属均签署知情同意书。

1.2　纳入标准和排除标准

纳入标准:(1)行肝血管瘤剥除术或肝切除术。(2)术前影像学和术后病理学检查确诊为肝血管瘤。(3)临床资料完整。(4)以临床症状为首要手术指征。(5)理解并回答《消化道相关生存质量指数量表》(GIQLI)所列问题。

排除标准:(1)失访患者。(2)人格缺陷、有精神疾病史。(3)临床资料缺失。

1.3　手术方式

根据患者肿瘤位置情况行肝血管瘤剥除术或肝切除术。肝血管瘤剥除术:根据术中情况采取第一肝门入肝血流阻断法或半肝血流阻断法,采用电刀沿肿瘤包膜进行剥离,完整将血管瘤切除,缝合断面肝实质,若无出血无须缝合。

肝切除术:解剖性或非解剖性切除血管瘤所在肝段或肝叶,完全离断肝组织,妥善止血,肝创面出血点进行缝扎或电凝止血,采用水平褥式缝合对拢肝断面。

1.4　观察指标和评价标准

观察指标:(1)手术及术后情况包括手术方式、肿瘤直径、术中出血量、术后住院时间、术后并发症及死亡情况。(2)患者生存质量评价情况:患者术前、术后 1 个月和术后 6 个月 GIQLI 总分、主观症状、生理状态、精神心理和社会活动评分情况。(3)合并其他消化道慢性疾病患者生存质量评价情况:合并其他消化道慢性疾病术前、术后 1 个月和术后 6 个月 GIQLI 总分、主观症状、生理状态、精神心理和社会活动评分情况。

评价标准:主观症状、生理状态、精神心理、社会活动能力参照 GIQLI,量表共 36 个项目,每项计 0~4 分,总分最高为 144 分。

1.5　统计学分析

应用 SPSS 17.0 统计软件进行分析。正态分布的计量资料以 $\bar{x}\pm s$ 表示,偏态分布的计量资料以 M(范围)表示。重复测量的计量资料采用重复测量方差分析,组间比较采用 t 检验。计数资料以绝对数表示。$P<0.05$ 为差异有统计学意义。

2　结果

2.1　手术及术后情况

104 例患者中,67 例行肝血管瘤剥除术,37 例行肝切除术。104 例患者肿瘤直径为(10±4)cm,术中出血量为 200 mL(10~3 000 mL),术后住院时间为(11±5)d。7 例患者术后发生并发症,其中腹腔大量积液 5 例,腹腔感染 1 例,肺梗塞 1 例,无死亡病例。

2.2　患者生存质量评价情况

104 例肝血管瘤患者术前 GIQLI 总分、主观症状、生理状态、精神心理和社会活动评分分别为(121.0±8.3)分、(69.2±4.1)分、(18.5±2.6)分、(19.5±1.8)分和(13.8±1.4)分。术后 1 个月,104 例肝血管瘤患者上述指标分别为(121.9±6.9)分、

(71.2±3.8)分、(17.2±2.5)、(19.6±2.3)分和(13.8±1.3)分。术后 6 个月,104 例肝血管瘤患者上述指标分别为(127.8±6.2)分、(73.2±3.6)分、(19.8±2.5)分、(20.8±2.4)分和(14.1±1.0)分。上述指标比较均有统计学意义(F = 68.4, 64.6, 71.4, 17.8, 3.3, P<0.05)。术后 1 个月与术前比较,主观症状、生理状态评分差异均有统计学意义(t=−5.780, 6.640, P<0.05),GIQLI 总分、精神心理和社会活动评分差异均无统计学意义(t=−1.569, −0.705, 0.240, P>0.05)。术后 6 个月与术前比较,GIQLI 总分、主观症状、生理状态、精神心理评分差异均有统计学意义(t=−8.897, −9.919, −5.375, −5.024, P<0.05),社会活动评分差异均无统计学意义(t=−1.919, P>0.05)。术后 6 个月与术后 1 个月比较,GIQLI 总分、主观症状、生理状态、精神心理和社会活动评分差异均有统计学意义(t=−10.835, −6.787, −12.277, −4.560, −2.476, P<0.05)。

2.3　合并其他消化道慢性疾病患者生存质量情况

104 例患者中,29 例合并慢性胃炎、胆道系统疾病、阑尾炎等。29 例患者术前 GIQLI 总分、主观症状、生理状态、精神心理和社会活动评分分别为(117.5±7.5)分、(67.8±4.2)分、(17.4±2.2)分、(19.0±1.5)分和(13.2±1.3)分。术后 1 个月,29 例合并其他消化道慢性疾病肝血瘤患者上述指标分别为(118.7±6.9)分、(69.5±4.5)分、(16.7±2.0)、(19.2±1.9)分和(13.2±1.3)分。术后 6 个月,29 例合并其他消化道慢性疾病肝血瘤患者上述指标分别为(124.6±6.5)分、(70.9±4.5)分、(19.8±2.1)分、(19.9±2.4)分和(14.0±0.9)分。GIQLI 总分、主观症状、生理状态和社会活动评分变化均有统计学意义(F = 15.0, 9.0, 27.6, 7.5, P<0.05),精神心理评分比较,差异无统计学意义(F = 1.6, P>0.05)。术后 1 个月与术前比较,主观症状、生理状态评分差异均有统计学意义(t=−2.612, 2.191, P<0.05),GIQLI 总分、精神心理和社会活动评分变化趋势均无统计学意义(t=−1.128, −0.587, −0.157, P>0.05)。术后 6 个月与术前比较,GIQLI 总分、主观症状、生理状态、社会活动评分差异均有统计学意义(t=−4.002, −3.441, −4.604, −3.266, P<0.05),精神心理评分差异无统计学意义(t=−1.522, P>0.05)。术后 6 个月与术后 1 个月比较,GIQLI 总分、主观症状、生理状态和社会活动评分差异均有统计学意义(t=−4.819, −2.313, −7.081, −3.172, P<0.05),精神心理评分差异无统计学意义(t=−1.154, P>0.05)。

3　讨论

生存质量由 WHO 定义为在不同文化和价值体系中个体对生理、心理、社会活动及功能方面的主观体验和感受[21]。相较于以往外科医师关注的手术时间、术中出血量、患者生存率、术后并发症发生率等指标,生存质量以人为本,顾全整个机体,强调生理、心理、社会多维度质量的改善,更符合新时期的生命状态评价理念[22]。20 世纪 90 年代,为评估新健康理念模式下的临床疗效,针对慢性消化系统疾病患者生存质量评价的研究进入高潮,相继开发了诸多量表,其中 Eypasch 等[23]开发完善的 GIQLI 作为消化系统疾病普适性量表得到公认。

本研究采用 GIQLI 对肝血管瘤患者术前与术后 1、6 个月进行量化评分,其研究结果显示:术后 6 个月患者 GIQLI 总分明显提高,超出术前约 6 分。这说明手术对提高肝血管瘤患者的生存质量有效。在各维度评分中,仅术后 1 个月时生理状态评分较术前下降。这可能是由于术后短时期患者切口痛、休息差、进食受限、活动受限造成生理机能的下降。在对肝血管瘤手术指征的争议中,明显的临床症状是否应作为手术指征是焦点[24]。《2016 年欧洲肝病学会临床实践指南:肝脏良性肿瘤的管理》指出:患者的消化系统症状与血管瘤特征几乎没有关系,对于体积巨大或是伴有轻微症状的血管瘤,手术治疗能否获益存有争议,尚没有试验可证明手术治疗的效果优于保守治疗[25]。因此,本研究对手术疗效评价的核心为手术是否消除临床症状。在主观症状维度评分中,患者术后 1 个月和术后 6 个月评分稳步提高,证明患者的临床症状得到有效改善,但这一结论还需要大样本量研究结果进一步证实。有学者提出:对精神心理负担过重的患者施行手术以解除患者心理压力[26]。本研究中,术后与术前精神心理维度评分基本持平。患者术前精神压力主要来源于对疾病的担忧和对手术的恐惧,对于术前精神压力过大的患者,或许手术并不能解除其心理压力。在更长时间后,当患者生理机能完全恢复,心理问题或许可得到解决。

有学者提出:诸如腹痛、腹胀等消化系统症状,可能并非由肝血管瘤导致,而是来源于胆道系统疾病、慢性胃炎等其他慢性消化系统疾病[27-31]。对于术前即发现相关合并症的患者,症状学上难以区分,即使通过实验室和影像学检查也难以在术前甄别症状来源。本研究对 29 例具有合并症的患者进行量化评分,术后 1 个月患者的 GIQLI 总分和各维度评

分(除生理状态评分)均有小幅增长,在术后 6 个月时,GIQLI 总分和各维度评分明显高于术前。这提示患者的主观症状得到明显改善,生存质量明显提升,因此,手术的决策与疗效均应得到肯定。但此结论仍需大样本量进一步研究。有研究结果显示:经过治疗最终确认腹部不适与血管瘤相关的患者仅占 12.6%左右[12]。雷正明等[32]回顾性分析 1 046 例因各种腹部不适症状就诊的肝血管瘤患者,最终确定 992 例患者症状并非血管瘤引起。因此,虽然本研究认为多数术前存在合并症的患者手术收益更大,但是在得到更多试验证据支持之前,手术的决策还需慎重。

目前通过超声、CT 和 MRI 3 种影像学检查方法结合临床表现与实验室检查,确诊肝血管瘤并不困难[33-41]。手术切除依然是肝血管瘤的首选治疗方法[42-46]。肝动脉栓塞仅对肝动脉供血的肿瘤有效,且长期效果并不理想,血管瘤易复发;微波消融对体积较小的瘤体有效,但远期并发症发生率高且常更为严重,临床上此 2 种方法均需慎用[47-55]。手术方法以肝血管瘤剥除术和肝切除术较为主流,本研究中患者也均采用此 2 种手术方式[56-59]。术后 1 个月患者存在切口痛、进食受限、体能下降等问题,无法承担与术前相同时长和强度的工作,尤以体力工作者为著,而在术后 6 个月,患者上述问题多已解决,可恢复术前正常的学习工作与生活。

综上,手术治疗可提高肝血管瘤患者生存质量。术前合并消化道慢性疾病肝血管瘤患者,手术治疗可改善 GIQLI 总分、主观症状、生理状态和社会活动,但术前应尽可能甄别症状来源。随着微创手术技术不断成熟与普及,笔者相信对于肝血管瘤术后患者生存质量的提高将会更有优势。

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· 读者 · 作者 · 编者 ·

本刊可直接使用英文缩写词的常用词汇

本刊将允许作者对下列比较熟悉的常用词汇直接使用英文缩写词，即在论文中第 1 次出现时，可以不标注中文全称。

AFP	甲胎蛋白	EST	内镜乳头括约肌切开	MRCP	磁共振胆胰管造影
Alb	白蛋白	EUS	内镜超声	MRI	磁共振成像
ALP	碱性磷酸酶	FITC	异硫氰酸荧光素	MODS	多器官功能障碍综合征
ALT	丙氨酸氨基转移酶	GAPDH	3-磷酸甘油醛脱氢酶	MTT	四甲基偶氮唑蓝
AST	天冬氨酸氨基转移酶	GGT	γ-谷氨酰转移酶	NK 细胞	自然杀伤细胞
AMP	腺苷一磷酸	HAV	甲型肝炎病毒	$PaCO_2$	动脉血二氧化碳分压
ADP	腺苷二磷酸	Hb	血红蛋白	PaO_2	动脉血氧分压
ATP	腺苷三磷酸	HBV	乙型肝炎病毒	PBS	磷酸盐缓冲液
ARDS	急性呼吸窘迫综合征	HBeAg	乙型肝炎 e 抗原	PCR	聚合酶链反应
β-actin	β-肌动蛋白	HBsAg	乙型肝炎表面抗原	PEI	经皮酒精局部注射疗法
BMI	体质量指数	HCV	丙型肝炎病毒	PET	正电子发射计算机断层扫描
BUN	尿素氮	HDL	高密度脂蛋白		
CEA	癌胚抗原	HE	苏木素-伊红	PLT	血小板
Cr	肌酐	HEV	戊型肝炎病毒	PT	血浆凝血酶原时间
CT	X 线计算机断层摄影术	HIFU	高强度聚焦超声	PTC	经皮肝穿刺胆道造影
DAB	二氨基联苯胺	IBil	间接胆红素	PTCD	经皮经肝胆管引流
DAPI	4,6-二脒基-2-苯基吲哚二盐酸	ICG R15	吲哚菁绿 15 min 滞留率	RBC	红细胞
		IFN	干扰素	RFA	射频消融
DBil	直接胆红素	IL	白细胞介素	RT-PCR	逆转录-聚合酶链反应
DMSO	二甲基亚砜	抗-HBc	乙型肝炎核心抗体	TACE	经探管(肝)动脉栓塞化疗
ECM	细胞外基质	抗-HBe	乙型肝炎 e 抗体	TBil	总胆红素
ELISA	酶联免疫吸附测定	抗-HBs	乙型肝炎表面抗体	TC	总胆固醇
ENBD	内镜鼻胆管引流	LC	腹腔镜胆囊切除术	TG	甘油三酯
ERBD	内镜逆行胆管支架引流	LDH	乳酸脱氢酶	TGF	转化生长因子
ERC	内镜逆行胆管造影	LDL	低密度脂蛋白	TNF	肿瘤坏死因子
ERCP	内镜逆行胰胆管造影	MMP	基质金属蛋白酶	TP	总蛋白

WBC　白细胞　　VEGF　血管内皮生长因子