

行气活血汤对 T 管胆汁中酶活性影响

——附 26 例观察

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行气活血汤在中西医结合治疗急腹症具有一定的临床效果⁽¹⁾。我们观察到胆道外科疾病常伴随血清中和 T 管胆汁中酶活性增加,应用行气活血汤等中西医结合方法治愈病例血清酶有明显下降⁽²⁾,推测行气活血汤对 T 管胆汁中酶活性可能也有影响。为此,我们自 1979 年以来观察 26 例应用行气活血汤对胆道手术后 T 管胆汁中 AKP、 γ GT、AD 与 LDH 服药前后的活性改变,现报道如下:

资料来源和方法

26 例中男性 11 例,女性 15 例,均为胆囊切除胆总管探查, T 管引流的良性胆系疾病。26 例分别在手术后 2~3 周,病情好转已停用抗菌素,首次服用中药时进行检测。

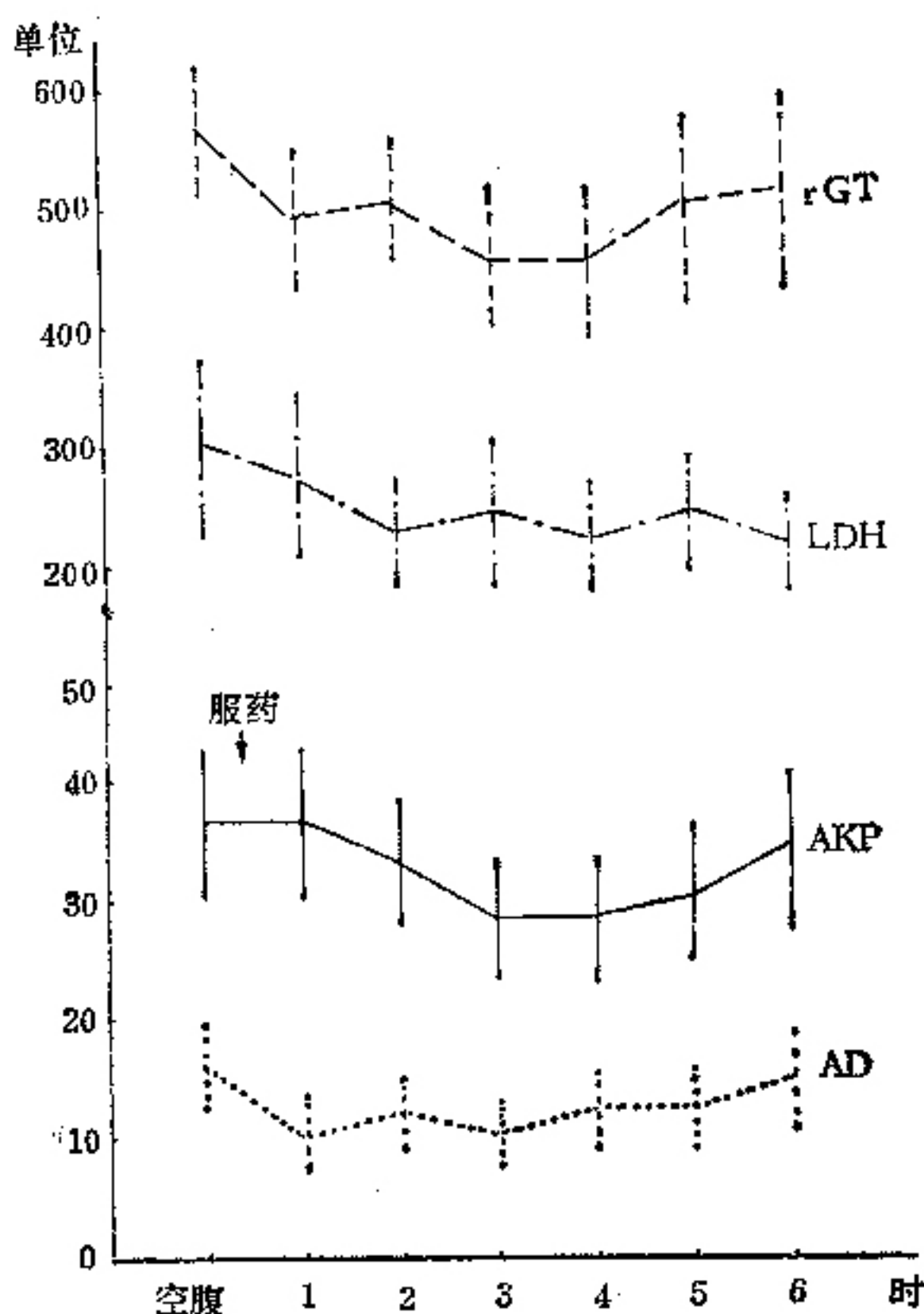
试验日晨 5~6 时留取胆汁一瓶(一个小时胆汁量)作为服药前对照标本,晨六时正内服行气活血汤一剂,浓煎 200ml。其后 7、8、9、10、11、和 12 时各留取胆汁 6 瓶,作为服药后标本。各瓶胆汁标本分别测定胆汁中 AKP、 γ GT、AD 和 LDH 水平

内服行气活血汤成份:生大黄 12g 红藤 30g 赤芍 9g 郁金 15g 桃仁 9g 厚朴 9g 公英 30g 白花蛇舌草 30g。

胆汁中酶测定方法,同血清中酶测定方法。 γ GT 采用 γ -谷氨酰对硝基苯胺法测定。AKP 采用 King-Armstrong 氏法测定。AD 采用我院改良 Martinek 氏微量测定法。LDH 采用比色测定法。本组资料均为本院中心实验室资料。

结 果

AKP 服药前对照组平均值 $\bar{X}_0 \pm S\bar{X}_0 = 36.99 \pm 6.21$ 金阿氏单位,服药后 1~6 小时各组水平分别为 $\bar{X}_1 \pm S\bar{X}_1 = 36.92 \pm 6.33$ 金阿氏单位, $\bar{X}_2 \pm S\bar{X}_2 = 33.81 \pm 5.56$ 金阿氏单位, $\bar{X}_3 \pm S\bar{X}_3 = 28.22 \pm 4.7$ 金阿氏单位, $\bar{X}_4 \pm S\bar{X}_4 = 28.28 \pm 5.47$ 金阿氏单位, $\bar{X}_5 \pm S\bar{X}_5 = 30.08 \pm 5.56$ 金阿氏单位, $\bar{X}_6 \pm S\bar{X}_6 = 34.86 \pm 7.83$ 金阿氏单位。服药前后比较,AKP 在服药后有下降趋势,以服药后 3~4 小时最显著,方差分析, $F = 5.20$, $P < 0.05$,有显著差异(见图)。



附图: 26 例服药前后胆汁酶活性变化

γ GT 服药前对照组平均值 $\bar{X}_0 \pm S\bar{X}_0 = 574.38 \pm 63.74$ 单位,服药后 1~6 小时各组水平分别为 $\bar{X}_1 \pm S\bar{X}_1 = 494.73 \pm 64.79$ 单位, $\bar{X}_2 \pm S\bar{X}_2 = 508.75 \pm 69.88$ 单位, $\bar{X}_3 \pm S\bar{X}_3 = 459.82 \pm 63.97$ 单位, $\bar{X}_4 \pm S\bar{X}_4 = 453.88 \pm 70.38$ 单位, $\bar{X}_5 \pm S\bar{X}_5 = 489.04 \pm 80.75$ 单位, $\bar{X}_6 \pm S\bar{X}_6 = 518.82 \pm 90.03$ 单位,服药前后比较, γ GT 在服药后有下降趋势,以服药后 3~4 小时最显著,方差分析, $F = 4.38$, $P < 0.05$,有显著的差异。

AD 服药前对照组平均值 $\bar{X}_0 \pm S\bar{X}_0 = 16.32 \pm 4.06$ 单位,服药后 1~6 小时各组分别为 $\bar{X}_1 \pm S\bar{X}_1 = 10.07 \pm 2.41$ 单位, $\bar{X}_2 \pm S\bar{X}_2 = 12.04 \pm 3.54$ 单位, $\bar{X}_3 \pm S\bar{X}_3 = 10.41 \pm 2.98$ 单位, $\bar{X}_4 \pm S\bar{X}_4 = 12.38 \pm 2.89$ 单位, $\bar{X}_5 \pm S\bar{X}_5 = 12.57 \pm 3.2$ 单位, $\bar{X}_6 \pm S\bar{X}_6 = 15.47 \pm 3.88$ 单位。服药前后比较,AD 在服药后有下降趋势,方差分析, $F = 4.70$, $P < 0.05$,有显著差异,但 AD 服药

前及后平均值约在正常血清值的范围内。

LDH服药前对照组平均值 $\bar{X}_0 \pm S\bar{X}_0 = 309.6 \pm 74.55$ 单位, 服药后1~6小时各组分别为 $\bar{X}_1 \pm S\bar{X}_1 = 279.33 \pm 72.33$ 单位, $\bar{X}_2 \pm S\bar{X}_2 = 229.62 \pm 50.34$ 单位, $\bar{X}_3 \pm S\bar{X}_3 = 254.63 \pm 73.13$ 单位, $\bar{X}_4 \pm S\bar{X}_4 = 221.55 \pm 45.82$ 单位, $\bar{X}_5 \pm S\bar{X}_5 = 247.38 \pm 45.64$ 单位, $\bar{X}_6 \pm S\bar{X}_6 = 219.2 \pm 39.71$ 单位, LDH在服药后有下降趋势, 方差分析, $F=0.04$, $P>0.05$, 无显著差异, 而且LDH服药前及后平均值在正常血清值的范围内。

讨 论

一、胆汁中酶水平: 正常情况下, 随着细胞年龄的增长, 酶可自细胞扩散至细胞外液, 酶可通过蛋白酶的分解代谢被灭活, 仅一小部分被排入胆汁⁽⁴⁾。胆汁的酶可以推测来自肝脏⁽⁵⁾。胆汁中AKP、 γ GT、AD与LDH水平究竟是多少? 我们对四例非肝胆系良性疾患, 血清AKP、 γ GT、AD与LDH水平在正常范围内的病人, 手术中将鼻胃管插入十二指肠内6cm, 抽取胆汁二管, 一管送胆汁培养, 结果均细菌生长, 另一管检测胆汁中酶, 结果: AKP $\bar{X}=44$ 金阿氏单位, γ GT $\bar{X}=27.6$ 单位, AD $\bar{X}=13.8$ 单位, LDH $\bar{X}=112.3$ 单位, 初步观察到胆汁中酶的水平, 除AKP高于血清外, γ GT, AD与LDH与血清中正常值相似。

二、胆道外科疾病患者的血清与胆汁中酶活性增高: Baker氏指出, 胆汁郁滞性疾病血清和胆汁中AKP、 γ GT和LAP活性增高, 可能与肝细胞或胆管上皮细胞受损害释放这些酶有关。胆汁中 γ GT活性在手术开始时标本值是增加的, 手术后第三天达最高峰, 然后逐渐下降。AKP活性则不同, 手术后第8天是渐进性增高, 而LAP活性较他酶或低或高, 但在收集胆汁整个期间是增高的⁽⁶⁾。我们在手术后2~3周内对6例胆囊切除T管引流病人, 同时测定血清和T管胆汁中AKP、 γ GT、AD与LDH水平, 发现两者中各酶水平不相一致。血清中AKP $\bar{X}=20.18$ 金阿氏单位, 而胆汁中AKP $\bar{X}=46.58$ 金阿氏单位; 血清中 γ GT $\bar{X}=224.86$ 单位, 而胆汁中 γ GT $\bar{X}=421.06$ 单位; 血清中

AD $\bar{X}=20.71$ 单位, 而胆汁中AD $\bar{X}=27.61$ 单位; 血清中LDH $\bar{X}=307$ 单位, 而胆汁中LDH $\bar{X}=112.32$ 单位。显示血清与胆汁中AKP与 γ GT活性增高, 胆汁中水平高于血清, 与Baker氏观察相一致, 推测其可能原因为手术解除胆管梗阻后, 还不能够排除受损害肝细胞释放的全部酶进入到胆汁, 部分回流到血循环中去。与此相反, AD与LDH血清和胆汁中水平均在血清正常范围内或接近正常值, 可能是大多数胆系疾病患者, 肝细胞遭受损害属轻度, 尚未达到导致AD与LDH活性升高的程度⁽²⁾。

三、行气活血汤对T管胆汁中酶活性影响: 服药后, 检测AKP、 γ GT有下降趋势, $P<0.05$ 。其机制有待于今后进一步研究。我们曾应用行气活血汤对犬的胆汁分泌与十二指肠乳头肌紧张进行初步观察, 发现用药后, 胆汁流量增加二倍以上, 一开始怀疑行气活血汤对T管胆汁中酶活性影响可能与利胆有关, 为此我们对本组中后阶段的15例, 测定服药前、后各组标本的每小时胆汁流量, 结果为对照组胆汁流量 $\bar{X}_0=17.63$ ml, 服药后各组胆汁流量分别为 $\bar{X}_1=21.57$ ml, $\bar{X}_2=21.4$ ml, $\bar{X}_3=25.4$ ml, $\bar{X}_4=26.73$ ml, $\bar{X}_5=26.73$ ml, $\bar{X}_6=24.3$ ml, 显示服药后胆汁流量有少量增加。但经方差分析, $F=0.95$, $P>0.05$, 无显著差异。提示行气活血汤对T管胆汁中酶活性影响可能与利胆关系不大。此外, 我们还做了行气活血汤对T管胆汁中酶的试管抑制试验, 结果 $P>0.05$, 无显著差异, 提示行气活血汤本身不存在直接抑制胆汁酶的物质⁽⁵⁾。我们推测行气活血汤对T管胆汁中酶活性影响可能与受损害的肝胆管上皮细胞释放AKP、 γ GT由过多恢复至正常有关, 致使胆汁中AKP、 γ GT活性降低。

胆汁中AD $\bar{X}_0=16.32$ 单位, LDH $\bar{X}_0=309.6$ 单位, 均在血清AD正常值 ≤ 25 单位和LDH正常值225~540单位内。尽管中药行气活血汤应用后, AD水平有下降趋势, $P<0.05$, 有显著差异, 但从临床角度来看, AD与LDH一样, 无多大意义。

(注: 本文胆汁酶测定法请杨振华老师指导; 统计请周德宏老师指导, 表示谢意。)

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Treatment of Eosinophilia with Combined Methods of Gan Chan Fen (干蟾粉) Zi Jin Ding (紫金锭) and Prednisone: A Clinical Observation of 13 Cases

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The article reports the combined effects of Gan Chan Fen, Zi Jin Ding and prednisone on eosinophilia without asthma. Of the 13 cases clinically observed, 7 recovered with the absolute value and the relative value of eosinophile below 450 cell/mm³ and 7% respectively, and the remaining 6 showed a marked improvement with the two values decreased after the treatment. The present article also makes a comparison between the combined effects of Gan Chan Fen, Zi Jin Ding and prednisone and those of prednisone or carbason alone. In addition, an analysis is made of the clinical data, the pathology, the administration of the drugs, and the factors which influence the effectiveness in the treatment. A tentative idea is put forward that the combined method may show a regulating action on an immune process.

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The Effect of "Passing-Gas and Activating-Blood" Mixture on Bile Enzyme Activities in 26 Patients

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High levels of AKP and γ GT were found in serum and T-tube bile from 26 patients undergoing cholecystectomy and exploration of the common bile duct for up to 2 or 3 weeks after operation. The activities of these enzymes were different, but higher in bile than in serum obtained during the period of bile drainage. AD and LDH, whether in serum or in bile, were normal or nearly normal in level. The activities of these bile enzymes AKP, γ GT, AD and LDH were reduced, particularly 3 or 4 hours after the mixture was taken by mouth. AKP fell from $\bar{X}_0 \pm S\bar{x}_0 = 36.99 \pm 6.21$ to $\bar{X}_3 \pm S\bar{x}_3 = 28.22 \pm 4.7$ ($P < 0.05$); γ GT, from $\bar{X}_0 \pm S\bar{x}_0 = 574.38 \pm 63.74$ to $\bar{X}_4 \pm S\bar{x}_4 = 453.88 \pm 70.36$ ($P < 0.05$); AD, from $\bar{X}_0 \pm S\bar{x}_0 = 16.32 \pm 4.06$ to $\bar{X}_3 \pm S\bar{x}_3 = 10.41 \pm 2.88$ ($P < 0.05$); LDH, from $\bar{X}_0 \pm S\bar{x}_0 = 309.6 \pm 74.55$ to $\bar{X}_3 \pm S\bar{x}_3 = 221.55 \pm 45.82$ ($P > 0.05$). The reduced activities of bile enzymes AKP, γ GT etc. might be due to the restoration of enzyme amount released from both damaged liver cells and bile-duct epithelial cells.

(Original article on page 37)

The Effect of Qi-Fu (芪附) Injection on the Acute Myocardial Ischemia, Left Cardiac Ventricular Function and Hemodynamics in Anesthetized Dogs

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Qi-Fu Tang (芪附汤, a solution made of 黄芪 Radix Astragali and 附子 Radix Aconiti Carmichaeli Praeparata) is one of the main recipes of the TCM, the effect of which is "Yi Qi Wen Yang, 益气温阳" (the replenishment of vital energy and the promotion of Yang) and "Hui Yang Jiu Ni 回阳救逆" (the restoration of Yang from collapse).

In this work the effect of Qi-Fu Injection on the myocardial ischemia, the left cardiac ventricular function and hemodynamics in anesthetized open-chest dogs was studied. The results of our study are: 1. a remarkable change in ST-segment on epicardial ECG was observed. $\overline{ST}\uparrow$ and $\overline{NST}\uparrow\%$ in animals with Qi-Fu Injection (Qi and Fu aa 50 mg/kg IV) decreased after the ligation of the coronary artery in 1-20 minutes compared with those in animals with ligation only; 2. changes in left ventricular function and hemodynamics measurements were noticed. In animals with Qi-Fu Injection after the ligation of the coronary artery, the decrease of the heart rate and blood pressure slowed down significantly the dp/dt , the left ventricular work index, the tension-time index and the myocardial volume oxygen index dropped greatly, and the stroke index increased markedly; 3. the process of thinning in the thickness of the left ventricular anterior wall were markedly eased. The left ventricular end-diastolic anterior wall thickness was reduced by about 26-27% when the coronary was simply ligated, whereas in the case when ligation was preceded by the administration of Qi-Fu, the ventricular wall thickness remarkably increased, i.e., 20-70% greater than the former. These findings suggest that Qi-Fu may significantly reduce the amplitude and amounts of increasing ST-segment in the myocardial ischemic zone and decrease the degree of ischemic and the injured range. Qi-Fu Injection possesses negative chronotropic and negative inotropic actions on ischemic myocardia. It can reduce the tension in the walls of the ventricle and left ventricular afterload, and increase the cardiac efficiency and output of the ischemic heart when oxygen and energy are supplied insufficiently. This is advantageous to the increase in blood flow and the supply of oxygen and energy. As the consumption of oxygen and energy of heart is decreased simultaneously, the balance between the supply and demand of oxygen is improved.

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