

中西医结合治疗肺心病患者的 阻抗肺血流图变化

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内容提要 本文以清热解毒和活血化瘀为治则的复方中药内服、丹参注射液静脉滴注及常规应用的西药治疗肺心病急性发作期患者 80 例。治疗 20 天后检测阻抗肺血流图的 8 项参数, 其中 B-y 间期、b-s 间期、波幅及肺动脉压与治疗前比较, 均有显著性差异 ($P < 0.05 \sim 0.01$)。结果说明, 中西医结合治疗对肺心病患者改善缺氧、纠正酸中毒、降低肺动脉压及改善心功能等方面均有重要的作用。

阻抗肺血流图主要反映肺循环血液动力学的变化, 是一种无创伤性的电测量的方法。我们从 1984~1985 年以阻抗肺血流图作为观察指标, 采用中西医结合方法治疗肺心病急性发作期患者 80 例。结果如下。

资料和方法

一、观察对象

健康人组: 100 例健康人, 经体检排除心脏、血管及肺部疾病。年龄均在 40 岁以上。男、女各 50 例。

肺心病组: 80 例均为肺心病急性发作期住院患者, 诊断符合 1977 年全国肺心病专业会议修订的“慢性肺原性心脏病诊断标准”。其中男 46 例, 女 34 例。年龄 20~84 岁, 40 岁以上 79 例, 占 98.8%。病程 2~50 年, 10~39 年者 58 例, 占 72.5%。肺部原发疾病以慢性支气管炎最多, 共 60 例次, 其余依次为慢性喘息性支气管炎 14 例次, 支气管扩张 9 例次, 肺结核 5 例次。80 例患者均有程度不同的右心衰竭。

二、治疗方法: 按清热解毒和活血化瘀治则, 内服中药: 芦根 30g 苡仁 20g 冬瓜仁 20g 全瓜蒌 15g 黄芩 15g 杏仁 10g 鱼腥草 30g 银花藤 30g 丹参 15g 川芎 10g 甘草 3g 桑白皮 15g。每日一剂, 连服 20 天。

其中 38 例加用丹参注射液 10ml 静脉滴注, 每日 1 次, 20 天为一疗程。全部患者常规予以西药抗感染、改善呼吸功能、调节酸碱平衡及一般支持疗法。

三、检测方法

1. 仪器: 使用成都国营亚光电子厂生产的 SCZM-I 血流阻抗微分仪。同步描记心电图、心音图、阻抗血流图和微分图。纸速 50mm/sec。

2. 电极: 用 3.5×4.5cm 长方形心电图电极板四块, 前胸及后背电极相同, 前缘探测电极的上缘平右前胸第二肋骨下缘, 内缘与右锁骨中线相平, 后背探测的上缘平右肩胛角下缘, 内缘与右肩胛线平行。反射电极 (电源电极) 分别放置于两探测电极远端 2~3cm 处。

3. 体位: 将电极安置妥善, 受检者于安静状态仰卧位休息数分钟后, 在平静呼吸状态下, 呼吸末暂停呼吸, 描记阻抗肺血流图及微分图各 3~5 个综合波。

4. 观察方法: 正常人测定一次。肺心病急性发作期患者于治疗前及治疗后 20 天, 测定阻抗肺血流图及微分图各一次。

5. 观察指标: 上升时间 (b-s) 秒 (sec); 波幅 (Hs); 欧姆 (Ω); Q-B 间期: (sec), 即右室射血前期 (RPEP); Q-B 指数 (Q-B/R-R 的比值); B-y

间期(sec),即右室射血期(RVET); $Q-B/B-y$; $B-y$ 指数 ($B-y/R-R$ 的比值); $\bar{P}PA$ 即肺动脉压,应用肺血流图法测算⁽¹⁾, $\bar{P}PA = -8.196 - 12.981 \text{ LogeH} + 9.576 Q-B/B-y (\text{mmHg})$ 。

结 果

一、肺心病急性发作期患者治疗前后检测结果: 见附表。

附表 健康人与肺心病患者阻抗肺血流图比较 (M±SD)

	Q-B(s)*	Q-B指数*	Q-B/B-y*	B-y(s)△	B-y指数*	Hs(Ω)△	b-s(s)**	$\bar{P}PA (\text{mmHg})$
健康人组 (100例)	0.11±0.03	0.14±0.08	0.31±0.09	0.37±0.04	0.42±0.06	0.22±0.08	0.26±0.04	15.13±4.54
肺心病组 (80例)	0.13±0.03	0.23±0.07	0.63±0.23	0.22±0.04	0.37±0.06	0.12±0.06	0.15±0.05	27.54±7.82
治后	0.14±0.03	0.22±0.07	0.62±0.34	0.24±0.06	0.37±0.07	0.13±0.06	0.17±0.05	25.79±7.56

注: 健康人组与肺心病组治疗前、后各项指标比较, 均 $P < 0.001$

* 肺心病组治疗前后比较, $P > 0.05$; △ 肺心病组治疗前、后比较, $P < 0.01$

**肺心病组治疗前后比较, $P < 0.05$

从附表说明,肺心病急性发作期患者经20天治疗后, $b-s$ 间期、波幅(Hs)、 $B-y$ 间期及肺动脉压与治前比较均有极显著差异。但 $Q-B$ 间期、 $Q-B$ 指数、 $Q-B/B-y$ 及 $B-y$ 指数四项参数治疗前后均无显著变化。

二、肺心病急性发作期患者治疗前后与健康人比较: 见附表。肺心病急性发作期患者治疗前肺血流图检测的8项参数与健康人比较, 各组经统计学处理均有极显著性差异 ($P < 0.001$)。说明此8项指标均具有诊断学意义。经中西医结合治疗后, 虽然 $b-s$ 间期、Hs、 $B-y$ 间期及 $\bar{P}PA$ 等4项参数较治前有明显或非常明显好转 ($P < 0.05$ 或 $P < 0.01$) 外, 与健康人组比较8项参数仍存在极显著差异 ($P < 0.01$)。说明肺心病患者经治疗后较治前虽有显著好转, 但仍未能恢复正常。

三、肺心病急性发作期患者参数标准符合率⁽²⁾: 本组80例肺心病患者中, 符合肺血流图三项以上参数者66例, 占82.5%; 符合二项参数者7例, 占8.8%; 符合一项者6例, 占7.5%; 无一项符合者1例, 占1.2%。

讨 论

阻抗肺血流图是反映肺循环血液动力学的变化。只有当肺部疾病影响肺循环血液动力学状态, 才能出现肺血流图的变化。本组80例肺心病急性发作期患者, 均有严重的呼吸道感染

和程度不同的右心功能不全。由于血液动力学的变化, 故阻抗肺血流图较健康人有极明显改变。与健康人组比较, 检测的8项参数均有极显著改变。根据肺血流图对肺心病的诊断标准, 80例中符合两项条件以上者73例, 占91.3%, 较国内一般报道为高⁽³⁾, 多系本组患者均有心功失代偿之故。说明此8项指标均具有诊断学意义。

根据中医辨证, 肺心病属肺肾气虚, 兼有不同程度痰饮和瘀血。当感受外邪, 引动伏痰, 郁里化热, 则痰热阻肺, 脉络受阻, 百脉不通, 故证见心悸喘促、口唇青紫、痰稠不利, 肋肋胀满疼痛, 或兼下肢水肿、苔厚、脉滑数等证。除肺肾气虚之本证外, 兼痰热壅肺、气滞血瘀。按“急则治标”的原则, 故采用清热解毒、活血化瘀治则治疗。经中西医结合治疗20天后, 反映在阻抗肺血流图各参数中, $B-y$ 间期及 $b-s$ 间期较治前明显延长; 波幅较治前患者显著提高; 肺动脉压明显下降。结果说明, 中西医结合治疗对肺心病患者控制感染, 改善缺氧, 纠正酸中毒, 减少肺血管阻力, 降低肺动脉压, 以及改善心功能方面起了重要的作用。

参 考 文 献

1. 王迪得, 等。阻抗肺血流图与肺血流动力学的关系。中华结核和呼吸系疾病杂志 1983; 3:162。
2. 段生福整理。肺阻抗血流图及其微分图对慢性肺心病诊断的研究总结。全国第四次肺心病会议总结 1983:452。

Changes of Impedance Pulmonary Rheogram in Cor Pulmonale Patients with TCM-WM Treatment

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Eighty cor pulmonale patients in acute exacerbation stage were treated with TCM-WM therapy, which comprised TCM compound prescriptions based on the principle of Qingre Jiedu (清热解毒, clearing up the heat and removing the toxic substance) and Huoxue Huayu (活血化淤, promoting the blood circulation and relieving the stasis) orally taken, Salvia injection intravenously dripping as well as drugs of WM routinely used. An investigation on the changes of impedance pulmonary rheogram (IPR) in patients with cor pulmonale in acute stage were noticeably abnormal compared with normal control group ($P < 0.01$). After 20 days of treatment in patients with cor pulmonale by TCM-WM therapy, the B-y interval, b-s interval of IPR indices and amplitude of IPR were significantly increased ($P < 0.05 \sim 0.01$), and the pulmonary hypertension also markedly improved ($P < 0.01$) as compared with the condition before treatment. However, no definite change in the remaining 4 IPR indices between the pre- and post-treatment was found. The results indicated that the TCM-WM treatment played an important role in the alleviation of hypoxia, correction of acidosis, reduction of pulmonary hypertension and improvement of cardiac function in acute stage of cor pulmonale.

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Clinical Observation on Effect of 42 Cases of Chronic Obstructive Pulmonary Disease with TCM-WM Treatment

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This paper reports 42 cases in a clinical observation for two years on the treatment of chronic obstructive pulmonary disease with combined TCM-WM therapy; the total effective rate of which was 85.7%. Data of MVV, %MVV, FEV₁, FEV₁%, MMEF, DLco, A-aDO₂, PaO₂, SaO₂ etc. showed difference between pre- and post-treatment, which was statistically significant in pulmonary function test and arterial blood gas analysis ($P < 0.05$ in all parameters). While data of VC, %VC, pH, PaCO₂ etc. were not statistically significant ($P > 0.05$ in all parameters). Besides the above mentioned treatment, if more attention was paid on ceasing smoking and Qigong (breathing exercise) during the treatment, the effect would be more beneficial.

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Clinical Analysis on 23 Cases of Cholecardiac Syndrome Treated with "Syndrome and Disease Differentiation"

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This paper reports 23 cases of cholecardiac syndrome, including 13 males and 10 females. The average age was 59 years old. All patients had pathological changes of biliary tracts accompanied with symptoms of coronary heart disease and abnormal ECG. Through syndrome differentiation, 3 types could be subdivided, i.e., the dampness heat type, the phlegm dampness type and cholecardiac type. The patients were treated with different prescriptions, but emphasis was laid on treatment of the cholepathy. 2 out of the 23 patients were treated with surgical operation. Average course of treatment was 42 days. Results: Symptoms of all patients disappeared. Measured by ECG, 11 cases were normalized, 8 cases improved, while no change occurred in 4 cases. The etiology, pathology, diagnosis and treatment in cholecardiac syndrome were discussed.

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