

慢性肺原性心脏病室性心律失常变化的临床研究

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内容提要 对20例慢性肺心病患者进行24小时动态心电图、昼夜动脉血气和血清电解质测定,以研究肺心病室性心律失常的变化规律。结果:室性早搏发生率100%,急性发作期频发室性早搏明显增多,脾肾阳虚型夜间短阵室速发生率增多($P < 0.05$)。符合中医“阴阳论”观点。缓解期多为偶发室性早搏。经多变量分析认为发作期室性心律失常与动脉血气恶化有关,缓解期与低血钾有关。故认为肺心病肺性早搏防治重点在纠正血气紊乱、改善心功能和维持电解质平衡,尤其重视夜间氧疗。

关键词 慢性肺原性心脏病 室性心律失常 血气分析 低血钾

慢性阻塞性肺部疾病(COPD)及肺原性心脏病(CP)患者心律失常的检出率随连续心电图监测,检出率明显提高^[1,2],但造成其发生室性心律失常(VA)的原因及其变化规律至今研究不多。作者对20例COPD伴CP者进行24小时动态心电图监测,同时作动脉血气和血清电解质测定以期了解其间的关系。现将结果报道如下。

资料与方法

一、研究对象:随机选择20例住院的COPD伴CP者,均符合1977年第二次全国肺心病会议诊断标准^[3]。其中男性11例,女性9例,年龄53~77岁,平均67.0岁。急性发作期和缓解期各10例。发作期中西医结合辨证分型属肺肾气虚外感型6例,脾肾阳虚水泛型4例。缓解期均属肺脾肾气阳虚型。监测前和监测期均未使用洋地黄、抗心律失常药和拟肾上腺素能药物;仅使用抗生素、氨茶碱0.1g/次,日服3次;对发作期患者加用低流量吸氧,部分病例加用糖皮质激素;缓解期不用氧疗。

二、研究方法:每例均常规12导联心电图记录,用美国GMED公司的Holter监护仪记录24小时动态心电图(DCG);以8am~8pm作为白昼,8pm~次晨8am作为夜间分析室性早

搏并计算其频度。用美国IL公司1303型pH/血气分析仪测定9am、3pm、9pm、3am动脉血气及pH,同时测血清电解质(钾、钠、氯及二氧化碳结合力)。用美国Abbott公司产TDX血药浓度分析仪测定血浆氨茶碱浓度。所测数据以 $\bar{x} \pm S$ 表示,均数差异用t检验法;相对数差异用 χ^2 检验;部分数据进行相关分析。

结 果

一、常规12导联ECG和24小时DCG结果

1. 常规ECG检查仅发现4例早搏(20%),其中房早3例,室早1例。但24小时DCG检查,房早检出率17例(85%),室早20例(100%);此外还出现多次缺血型ST-T发作。

2. DCG监测室性早搏,按发作期和缓解期以及昼夜间不同时期比较见表1:室早按Lown氏分级表明缓解期均为偶发室早(I级)而发作期频发室早(II级)增多,两组比较有显著性差异, $P < 0.05$ 。在发作期夜间室早级数增高,4例出现短阵室速,均属脾肾阳虚水泛型,与白昼比较有显著差异, $P < 0.05$ 。

二、昼夜间血气变化,见表2。

1. 平均动脉氧分压(PaO_2)在发作期明显降低,且以9pm时最低,与昼间最高平均值相

表1 肺心病各期昼夜间室性早搏分级比较 (例)

分期	I级室早 (<30 次/h)	II级室早 (>30 次/h)	IVa室早		IVb室早	
			有	无	有	无
发作期	昼	6	4	8	2	0
	夜	9	1	8	2	4
缓解期	昼	10	0	4	6	1
	夜	10	0	5	5	0

表2 肺心病昼夜动脉血气及pH的变化 ($\bar{x} \pm S$)

类别	分期	9am	3pm	9pm	3am	P值
PaO ₂ (kPa)	发作期	8.40 $\pm$ 2.54	8.68 $\pm$ 2.38	7.88 $\pm$ 2.51	7.99 $\pm$ 1.61	>0.05
	缓解期	9.76 $\pm$ 2.13	9.68 $\pm$ 1.61	8.78 $\pm$ 2.11	9.23 $\pm$ 1.81	>0.05
PaCO ₂ (kPa)	发作期	7.96 $\pm$ 1.95	8.19 $\pm$ 2.19	8.82 $\pm$ 2.11	9.17 $\pm$ 2.17	>0.05
	缓解期	5.88 $\pm$ 0.61	6.40 $\pm$ 0.55	6.06 $\pm$ 0.74	6.66 $\pm$ 1.08	>0.05
动脉 血 pH	发作期	7.298 $\pm$ 0.07	7.323 $\pm$ 0.09	7.216 $\pm$ 0.08	7.246 $\pm$ 0.08	>0.01
	缓解期	7.397 $\pm$ 0.03	7.385 $\pm$ 0.03	7.377 $\pm$ 0.06	7.351 $\pm$ 0.05	>0.05

3. 动脉血 pH 变化: 在发作期呈酸血症表现, 夜间pH下降尤著 ($P<0.01$); 缓解期, 虽在正常范围, 但夜间仍有下降 ($P<0.05$)。

三、血清电解质的变化: 血钾: 缓解期5/10例 <3.5 mmol/L, 发作期6/10例 <3.5 mmol/L。血钠: 缓解期和发作期各1例 <135 mmol/L。血氯: 发作期6例 <90 mmol/L, 缓解期仅2例下降。各电解质在昼夜间所测值无明显变化 (钾、钠、氯P值均 >0.05)。

四、20例血清氨茶碱浓度测定均低于44 μ mol/L(8mg/L)。故认为无意义。

五、室早与血 pH、血气变化以及血清电解质之间的关系: 通过计算室早与各变量的相关系数判断。结果: 发作期室早升级与 PaCO₂相关性 ($r=0.90$) $>$ 动脉血 pH ($r=-0.87$) $>$ PaO₂ ($r=-0.63$) $>$ 血氯 ($r=-0.48$) $>$ 血钾 ($r=-0.2$)。而缓解期室早与血钾相关性 ($r=-0.86$) $>$ PaCO₂ ($r=0.43$) $>$ 动脉血 pH ($r=-0.35$) $>$ 血氯 ($r=-0.28$) $>$ PaO₂ ($r=-0.25$)

讨 论

本组资料表明用Holter监测CP患者, 室性心律失常(VA)检出率高达100%。探讨VA变化符合以下规律。

比, 下降0.79kPa(6mmHg)。缓解期也以9pm最低, 与白天比较, 下降0.93kPa(7mmHg)。但均无统计学差异, $P>0.05$ 。

2. 平均动脉二氧化碳分压 (PaCO₂) 在发作期明显增高, 夜间(3am)更高, 较白天增加0.93kPa左右 ($P>0.05$)。缓解期 PaCO₂虽下降, 但夜间仍有增高趋势, 平均增值达0.79kPa ($P<0.05$)。

一、CP缓解期的VA发作频度低, 而发作期时不仅室上性心律失常增加外, VA发作也增多。

二、在缓解期昼夜对VA影响不大, 而发作期夜间VA级数增加, 易发生短阵室速, 且多为脾肾阳虚水泛型患者。这与夜间低氧血症加重⁽⁴⁾, 以及中医“天地、阴阳论”观点相符⁽⁵⁾, 即后半夜为阴中之阴, 心气(阳)不足加重, 血流不畅, 气血不足, 故脉结代更易出现。

三、CP的VA变化是受多变量的影响。本文结果表明, 发作期VA的加重与PaCO₂升高、PaO₂下降和酸血症有密切关系。由于夜间PaO₂进一步下降, 使心衰加重, 交感神经张力代偿性增强, 符合Khokhar认为低氧血症只有在伴有神经兴奋和肾上腺素能兴奋性增加时才有致心律失常作用⁽⁶⁾。缓解期的VA仅与低血钾有相关性, 与血气变化无明显相关。

因此, 我们认为在CP发作期, 防治VA的关键在于改善血气异常, 纠正酸血症和控制心衰, 尤其加强夜间氧疗对防治CP猝死有重要意义。而缓解期, 则注意调整体内环境的稳定, 尤其注意低血钾的及时纠正, 可望减少VA发生。

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柴胡桂枝汤加味治疗脂膜炎13例

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我们于1974~1989年,用柴胡桂枝汤加味治疗脂膜炎13例,效果显著。现报告如下。

临床资料 13例中男性4例,女性9例;年龄19~58岁,平均38岁;病程,3个月~10年,平均2.8年。病变:下肢局限者5例,全身播散性者8例。皮肤泛起红斑者12例,皮下结节或斑块者13例,局部疼痛者12例,自汗者13例,畏寒、低热者11例,高热不退者2例,纳减、恶心、脘腹胀闷者11例,疲乏无力者12例,肌肉关节疼痛者13例,舌质多淡红,苔白,脉弦细兼浮。本文13例,均经活组织病理检查确诊。

治疗方法 柴胡10~30g 黄芩10~20g 党参10g 半夏9~15g 桂枝9g 白芍10g 生姜6g 大枣6枚 甘草6g。临症加减:出现红肿斑块者加金银花、地丁、蒲公英等以清热解毒;皮下结节形成,触痛,而以湿热蕴结者加乳香、桃仁、鸡血藤等活血通络;加苡仁、制南星,重用半夏,以燥湿化痰;高热不退者,重用柴胡、黄芩、羚羊粉1.5g冲服。每日一剂,水煎两次,分两次温服。高热不退者,日两剂,分4次温服。10剂为1疗程,一般连服2~3个疗程。临床观察,多在两个疗程左右症状即可缓解。根据病情需要,原方剂量二倍,炼制蜜丸,每丸重9g,每次1丸,1日3次,以资巩固。

结 果 疗效标准:痊愈:症状消失,红肿斑块、皮下结节消退,观察半年以上无反复者;显效:症状基本消退,皮肤斑块、皮下结节大部分消失,观察半年,少有复发;好转:症状、体征均有好转;无效:症状、体征,经治疗无改善。结果13例除两例高热不退,经治疗体温下降,病情好转,失去联系,其余11例均获痊愈。见效时间,4天~3个多月,一般20天左右。随访观察11例,除一例8个月后复发1次,经上方加味又获愈外,余10例均未复发。最长的已达

16年。

典型病例 陈某某,男,48岁,农民。反复发生皮下结节10余年。皮下结节发生在颈背、四肢、胸腰背部等处。先为局部红肿斑块,疼痛,小如钱币,大如掌面,伴有畏寒、发热、肌肉关节疼痛、倦怠、纳减、恶心等症状,7~8天后,红肿面积缩小,局部变硬,颜色变暗,形成皮下结节。小如花生仁大,大如核桃,不化脓。一般3~4周,少数一年以后消退。每年夏、秋、春季好发,冬季少见,阴天重。素常自汗,易患感冒。

检查:内科检查(一)。各关节活动自如,无红肿。颈背左侧,右腕关节外侧,两小腿外侧有皮下结节4处,直径1~2cm,与皮肤粘连,不活动,触痛,肌肉无萎缩。取左小腿外侧一皮下结节,活组织检查:脂膜炎Ⅰ期变化。舌淡红,苔薄白,微黄;脉弦细兼滑。西医诊断:脂膜炎;中医辨证:表虚卫弱,痰核阻络。治宜调和营卫,破结排毒。方拟柴胡桂枝汤加味共服5剂,服药3天,诸结节疼痛悉除,第10天后,皮下结节全部消退。随访6年未反复。

体 会 脂膜炎,属于中医“皮下结核”之范畴。本文13例患者,素常自汗,易患感冒,表虚卫弱,外邪乘虚而入,内有痰湿,凝聚皮肉之间,导致营卫不和,气血运行不畅,经脉络道瘀阻所致。皮肤泛起红斑、皮下结节,伴有畏寒、发热、自汗、纳减、肌肉关节疼痛等症状,说明邪入少阳,并兼太阳表症,故投以柴胡桂枝汤。柴胡桂枝汤剂量,随证掌握。一般治疗,可分为两种剂量。小剂量,适合于病情发展缓慢或时轻时重,迁延不愈。如果病情处于发病初期,病情急骤,或高热不退等实证情况下,宜用大剂量,柴胡可用至30g,黄芩加大至20g,半夏用至15g,临床应用,未见副作用,辨证确切,效若桴鼓。

Clinical and Experimental Research on Prevention and Treatment of Child Reversal Respiratory Tract Infection by Feibao(肺宝)

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This article reports the child reversal respiratory tract infection treated with Feibao syrup which produced in accordance with the TCM theory of "the evil factor can't attack the body with vital-Qi(气)" and "the evil factor will attack the body which vital-Qi is weak". Feibao syrup consisted of Radix Astragali, Herba Hedyotis diffusae, etc. The clinical research proved that after taking the medicine, the general condition, appetite and anemia were improved, the profuse sweating disappeared, the tolerance against cold was improved, the frequency of occurrence of the disease was decreased or ceased. Even if the disease occurred, the symptoms were mild, the disease course was short. The efficacy of the medicine was 95.2%. It was better than that of levamisole (78.6%), $P < 0.05$. This medicine can obviously improve the level of serum IgA and the cellular immunity ($P < 0.01$). The experiment on mice manifested that it could obviously enhance the macrophage phagocytic rate, lymphocyte transformation rate, EAC rosette forming rate, and hemolysin generating rate.

Key Words Feibao, child reversal respiratory tract infection

(Original article on page 206)

Clinical Observation on 301 Cases with Bronchial Asthma Treated by Kahusu(卡虎素)

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301 cases of bronchial asthma (BA) in observation group were treated by Kahusu [each tablet contained 50 mg heat-killed BCG and 50 mg Huercaosu (虎耳草素)] with the oral administration 1 tablet each time, 3 times each week and 30 cases of BA in control group were treated by heat-killed BCG (each tablet contained 100mg) with the oral administration 1 tablet 3 times each week. Each treatment course was 3 months in both groups. After 1 year's treatment the effective rates of these 2 groups were 81.40% and 80% respectively, and during 2 years follow-up the effective rates of both groups were 44.83% and 42.31% respectively. It was not statistically significant between both groups. The therapeutic effects were associate with the type and the condition of BA. Laboratory examination showed that IgG, IgA value increased, PHA and OT test strengthened and C_3 lowered clearly. It indicated that both cellular and humoral immunity had been strengthened and inflammation had been resolved. In the course of treatment no side effect had been found.

Key Words Kahusu, bronchial asthma, immunity drug, dead BCG, Huercaosu

(Original article on page 209)

Clinical Studies on Changes of Ventricular Arrhythmias in Patients with Cor Pulmonal

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This paper reported the results of 24 hours continuous ECG, day time and overnight arterial blood gas/pH and serum electrolytes in 20 patients with cor pulmonal, in order to investigate the rule of changes of ventricular arrhythmias (VA). The results were as follows: (1) Incidence of VA in 24 hours Holter Monitoring was 100%. (2) Frequent VPBs were increased significantly in period of acute attack (40%, $P < 0.05$). (3) Non-sustained VT in the nocturnal (40%) was more than the day time in period of attack ($P < 0.05$). (4) Relationship between VA and variables in period of attack: PaCO_2 ($r = 0.90$) > arterial blood pH ($r = -0.87$) > PaO_2 ($r = -0.63$); in relieved period VA were only related to serum potassium ($r = -0.86$). The authors speculated the severity of VA in period of attack was related with worse of arterial blood gas/pH, cardiac dysfunction and compensated enhance of sympathetic activity. It seems that the view accorded with theory of Yin-Yang (阴阳) in TCM.