

应用胰岛素敏感性指数研究中药 对 II 型糖尿病人胰岛素抵抗的作用

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摘要 本文运用一项新的检测人群胰岛素敏感性的指数——空腹血浆胰岛素(FINS)与空腹血糖(FPG)乘积的倒数,研究了中药“世良降糖散”在治疗 II 型糖尿病中,对病人胰岛素敏感性的影响。结果显示治疗后较治疗前胰岛素敏感性增加($P<0.05$),说明该药能降低 II 型糖尿病人的胰岛素抵抗。

主题词 糖尿病,非胰岛素依赖/中医药疗法 胰岛素拮抗药 胰岛素/代谢

II 型糖尿病人的发病原因除有胰岛功能的改变外,更主要的表现为周围组织存在胰岛素抵抗,即周围组织对胰岛素的敏感性降低,因此研究中药必须研究其对胰岛素抵抗的作用。既往研究证明,服用中药“世良降糖散”能改善糖耐量,临床降糖效果显著,可能由于改善了胰岛 B 细胞功能^[1]。本文运用一项检测胰岛素敏感性的指数——空腹血浆胰岛素与空腹血糖乘积的倒数($1/\text{FINS} \times \text{FPG}$)^[2]进一步探讨应用中药“世良降糖散”治疗 II 型糖尿病人的胰岛素敏感性变化。

1 对象与方法

1.1 研究对象:按 WHO 1985 年糖尿病诊断标准及分型,选择我院门诊 II 型糖尿病人。条件:(1)年龄在 60 岁以下者;(2)病程小于 10 年的;(3)眼底无改变,尿蛋白阴性者。共 11 例,男性 7 例,女性 4 例。年龄 31~59 岁(中位数 42 岁),病程 1 个月~5 年(中位数 7 个月)。

1.2 治疗方法及标本采集:全组病人均在饮食疗法及运动疗法基础上,2 周后给予“世良降糖散”口服,分别早、午、晚饭前半小时各 7 粒,睡前 4 粒口服,以后根据血糖、尿糖逐渐减量,治

疗 4 周。

“世良降糖散”由穿心莲、天花粉、西洋参、藏红花、黄芪、山药、枸杞、生地、葛根、麦冬、虎杖、人参、番石榴等 18 种中药组成。每粒“世良降糖散”含中药 500mg。具有滋阴补肾、清热健脾、活血通络、止渴生津、降糖壮阳等作用。每例病人均于用药前及用药 4 周后采取空腹静脉血,立即测血糖。另外分离取血浆于一 20℃ 冰箱保存,1 周内测血浆胰岛素。

1.3 检测方法:血糖测定采用静脉血葡萄糖氧化酶试纸法。仪器为 Reflolux's Type 1172123(德国产)。空腹血浆胰岛素采用放免法。试剂盒由北京华清生化技术研究所提供。

1.4 数据统计处理方法:取空腹血浆胰岛素与空腹血糖乘积的倒数的自然对数($\text{Ln}1/\text{FINS} \times \text{FPG}$)进行 t 检验^[2]。

2 检测结果

附表示,治疗后空腹血浆胰岛素有下降,但尚无显著性差异($P>0.05$);空腹血糖治疗后下降明显($P<0.01$); $\text{Ln}1/\text{FINS} \times \text{FPG}$ 治疗后有显著下降($P<0.05$),显示患者对胰岛素敏感性增加。

附表 治疗前后三项指标变化比较

项 目	例数	治疗前 均值	治疗后 分值	治疗后-治疗前 均差值±标准误
FINS(mU/L)	11	11.65	13.39	1.74±1.21
FPG(mmol/L)	11	11.77	7.23	-4.54±1.27**
$\text{Ln}(1/\text{FINS} \times \text{FPG})$	11	-4.74	-4.40	0.34±0.13*

治疗前后比较 * $P<0.05$, ** $P<0.01$

3 讨论

目前尚无公认的理想而又实用的检测胰岛素敏感性的方法。国际上采用的胰岛素钳(clamp)技术测定胰岛素敏感性指数由于操作繁杂、价格昂贵而未能广泛应用。新近提出的

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检测胰岛素敏感性的指数($1/\text{FINS} \times \text{FPG}$)已被研究证实,与胰岛素钳技术测定的胰岛素敏感性指数,即胰岛素介导的葡萄糖代谢率($\text{glucose metabolized, mg} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$)呈高度显著相关($r > 0.7, P = 0.001$)^[2,3]。本文运用这一指数研究了中药“世良降糖散”对II型糖尿病胰岛素抵抗的影响。II型糖尿病的发病机理主要是周围组织对胰岛素存在抵抗,即机体对胰岛素敏感性降低。一般认为中医中药治疗II型糖尿病首先要研究胰岛素抵抗,仅改善胰岛B细胞功能而不能使胰岛素抵抗减轻的治疗并非理想^[4]。本组观察11例病人服用“世良降糖散”4周后能明显改善胰岛素敏感性,提示周围组织对胰岛素抵抗降低。从一定程度上评价了此胰岛素敏感性指数的实用价值。

本组病例中有9例用药4周后的 $\text{Ln}(1/\text{FINS} \times \text{FPG})$ 数值增加,即周围组织对胰岛素

敏感性改善。2例敏感性下降。胰岛素敏感性改善者占全组病人81.8%。由于每个人的个体差异很大,2例没有改善可能另有原因。此指数是评价胰岛素抵抗的整体指数,能引起胰岛素抵抗的因素很多,包括胰岛素受体异常、胰岛素受体抗体、受体后缺陷等等,都有待于今后进一步研究。

4 参考文献

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中药搽剂治疗浅表性霉菌病疗效观察

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浅部霉菌病是常见病和多发病。近20年来,我们应用中药配制外用搽剂治疗浅表性霉菌病取得了较满意的疗效,现报告如下:

1 治疗方法:治疗组300例外用中药搽剂。制作方法:取斑蝥(去头足)20g,半夏(最好用生半夏)30g,白芷30g,加入75%酒精2000ml调匀浸泡,1周后滤出橙色透明液体,盛磨口瓶中备用。

用法:直接用棉棒蘸药液外涂患处,至涂擦到皮损处起水泡为止。水泡可穿破,注意局部清洁,预防感染。一次发泡为1个疗程,无效或疗效欠佳者可再重复一次。一般1个疗程3天,第2个疗程要等局部水泡干燥后再用药。治疗组最多2个疗程。对照组60例均用克霉唑癣药水、灰黄霉素药膏等类药物外搽治疗。

2 疗效标准及结果:皮损消失,不发生新的皮损,无脱屑,原皮损处同正常皮肤,或头癣成明疤,一般皮损小的生发,发质正常,无任何结痂及头屑等为治愈;皮

损缩小50%或缩小不足50%,但已无瘙痒症状;或只有少许皮损处的皮肤粗糙,无水疱、脱屑但皮肤不再增厚为有效;与初治时皮损程度相同,未见明显变为无效。两组均治疗30天后判定疗效。

经治疗后,治疗组300例中获治愈230例(76.7%),有效66例(22.0%),无效4例(1.3%),总有效率为98.3%;对照组60例,获有效23例(38.3%),无效37例(61.7%),总有效率为38.3%,无治愈者。经分析,治疗组中股癣、头癣、手足癣疗效基本一致。

3 讨论:浅表性霉菌病系中医的股癣、顽癣、牛颈癣、秃疮之类疾病,中医认为致病因为风、湿、虫相搏,所以治宜祛风除湿杀虫止痒为主。本方应用斑蝥,性辛寒,有毒,功用逐瘀攻毒,外用治恶疮顽癣。近年有报道,本品有发泡作用,对黑色毛癣菌等皮肤真菌有治疗作用;半夏辛温有毒,燥湿化痰;白芷祛风燥湿消肿止痛,对小芽胞癣菌有一定抑制作用。中医文献记载有治皮肤燥痒、疥癣功效,以上三药合用,取其祛风除湿、杀虫止痒、以毒攻毒的作用,制成外用中药搽剂,立意明确,治法得当,所以能奏效。

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ABSTRACTS OF ORIGINAL ARTICLES

Fifty — seven Cases of Chronic Gastritis with Ulcerative Colitis Treated on the Basis of Differentiation of Zheng

Meng Murong

All the 57 cases were divided into four syndrome types, viz. liver—depression Qi—stagnation, damp—heat of stomach and intestine, deficient—cold of spleen—stomach, mixed heat and cold. Results were: 23 cases cured (40.4%), 28 effective (49.1%), the total effective rate being 89.5%. When the effective rate of the two disorders were assessed separately, for chronic gastritis, 23 cases were cured (40.3%), 28 effective (49.1%); for ulcerative colitis, 25 cases were cured (43.8%), 28 effective (49.1%). The total effective rates were 89.5% and 93.0% respectively, with no significant difference between them ($P > 0.05$). The coincidence of the efficacy further showed that the two disorders are closely related pathologically, hence treatment should be performed for both simultaneously.

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Key Words: Gastritis/TCM therapy colitis, ulcerative/TCM therapy treatment based on differentiation of Zheng

(Original article on page 89)

Investigation on the Action of Chinese Materia Medica on Insulin Resistance in Type—II Diabetic Mellitus by Applying Senesitive Index of Insulin

Feng Shiliang, Gao Bin, Bai Shuying.

By using a kind of new index for determining the sensitivity to insulin in human groups, viz. the reverse of the product of fasting insulin multiplied by fasting blood glucose, the effect of a Chinese drug, "Shiliang Jiantang Powder" on the insulin sensitivity in type—II diabetics was studied. Results showed that the sensitivity to insulin was increased after treatment ($P < 0.05$), demonstrating that this remedy lowered the patient's resistance to insulin.

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Key Words: Diabetes mellitus, non—insulin dependent/TCM therapy antagonist of insulin insulin/metabolism

(Original article on page 100)

Experimental Studies on Effect of Yincheng Wuling Powder on Hyperlipoproteinemia and Its Lipid Peroxidation

Yu Rong, Wu Yongjun

Administration of Yincheng Wuling Powder, a recipe formulated by Zhang Zhongjing, can markedly inhibit the contents of Tch, TG, LDL and increase the ratio of LDL/HDL in rat models. Analysis on the recipe showed Yincheng (Herba Artemisia Capillaris) and Wuling (Five—Poria) Powder all markedly lowered the Tch contents in mice of hypercholesterol level, while the Yincheng Wuling Powder yielded the actions of both. Moreover, the recipe yielded marked action of antioxidation, lowered the blood content of MDA, activated the action of GSH—PK.

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Key Words: Hyperlipemia/TCM therapy Lipid Peroxidation/drug action Yincheng Wuling Powder/pharmacology

(Original article on page 104)

Experimental Studies on Injuries of Kidney by External Blast Waves Prevented and Treated by Xiaoyu Huashi Mixture

Chi Jian'an, Yi Wangfeng, Tang Peiqiong

Observation was made on 35 patients of renal lithiasis receiving ESWL for the changes of β_2 —MG in blood and urine before and after treatment. Results revealed that the contents of blood and urine β_2 —MG 24 hours after lithotripsy was increased in the control group, with significant difference ($P < 0.01$), even 72 hours after treatment, restored to normal only until 168 hrs. While in the treatment group, there were no significant difference before and after the operation, the difference being not significant ($P > 0.05$). These showed that the lithotriptic operation can cause, to a certain extent, injury to the kidney, while the mixture decrease the injury caused by ESWL and accelerate its rehabilitation.

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Key Words: kidney/pathology lithotripsy, laser/side effect @ Xiaoyu Huashi agent

(Original article on page 108)