

• 实验研究 •

归红液对兔内毒素血症血清溶酶水平影响的观察

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内容提要 本文采用生理盐水对照的方法,肯定了归红液(当归、红花组成)阻遏兔内毒素血症血中 β -葡萄糖醛酸酶和组织蛋白酶D的升高作用。单味当归和单味红花也有同样作用,但弱于归红液,提示归红液阻遏内毒素血症时,血中溶酶的升高可能是当归和红花的协同作用。

溶酶体是细胞内一个重要的胞质细胞器。它不仅参与细胞内消化、防御、调节分泌细胞活动等重要的生理过程,而且与很多疾病的发生有关,例如肝、肾脏疾病以及高血压、心肌疾病、风湿性关节炎、红斑性狼疮、过敏性疾病、职业病,特别是各种动因所致的休克均伴有血中溶酶水平的升高⁽¹⁾。中医治疗上述疾病,常于常规治法的同时,添加当归、红花等活血化瘀药物,收到良好效果。为此,本文选择 β -葡萄糖醛酸酶和组织蛋白酶D活性作指标,研究中药归红液对内毒素血症兔血中溶酶水平的影响,报告于下。

材料和方法

一、取体重1.7~2.6kg健康家兔34只,配对分成生理盐水组(对照组)和归红液组。

两组兔均采用3%戊巴比妥钠腹腔麻醉(1ml/kg)。由湖南微生物研究所提供大肠杆菌内毒素(ET)的粗制品,含量为 3.667×10^{11} 个/ml。ET注射剂量按原液0.64ml/kg计算,再加等量生理盐水稀释后由耳缘静脉推注。归红液由当归、红花组成,每毫升含生药当归0.5g、红花0.25g,系本院附一院药剂科制备,按2.56ml/kg剂量由耳缘静脉给药,其中1/2药量于注入ET前10分钟注入,另1/2药量于注入ET后10分钟注入。对照组使用的生理盐水、剂量和注射途径与归红液相同。

分别于注ET前及注后6小时,由颈总动脉取血,检测血清中 β -葡萄糖醛酸酶和组织蛋白酶D活性。前者采用Fishman法⁽²⁾改良(比活性单位:1ml血

清于37°C水浴1小时催化酚酞葡萄糖醛酸释放1 μ g酚酞)。后者采用Anson法⁽³⁾改良(比活性单位:每100ml血清在37°C与基质作用100分钟时生成1.0mg酪氨酸)。

二、另取体重1.5~2.5kg健康家兔15只,随机分成生理盐水组、当归组、红花组。麻醉、当归液、红花液用量、给药途径和取血部位同前。红花和当归均为市售注射液。红花每毫升含生药0.1g,当归每毫升含生药0.5g。ET注射剂量按原液0.48ml/kg计算,分别于实验前、注射ET后4小时,检测血清中 β -葡萄糖醛酸酶和组织蛋白酶D活性。

三、取未给内毒素健康家兔血清,分别加0、50、75、100 μ l归红液于基质液中,按同样条件进行保温,然后进行 β -葡萄糖醛酸酶和组织蛋白酶D活性检测,分别取样5次,进行重复测定。

实验结果

一、归红液与溶酶活性:生理盐水组和归红液组,实验前 β -葡萄糖醛酸酶和组织蛋白酶D活性是接近的($P>0.05$),说明二者具有可比性。注ET6小时后,盐水组 β -葡萄糖醛酸酶和组织蛋白酶D活性均显著升高($P<0.001$)。但归红液组注ET前后,无明显差异($P>0.5$ 和 $P>0.2$)。注ET6小时, β -葡萄糖醛酸酶和组织蛋白酶D活性,二组相比具有明显差异($P<0.002$)。具体结果见表1。

从表1可看出,由静脉注射ET确可使动物血清中溶酶活性水平增加,而归红液对ET引起血中溶酶升高具有阻遏作用。

表1 归红液对内毒素血症兔血清溶酶活性的影响(M±SE)

	动物数	β -葡萄糖醛酸酶(U)			组织蛋白酶D(U)		
		ET前	ET后6小时	前后比较(P)	ET前	ET后6小时	前后比较(P)
生理盐水组	18	30.1±3.5	62.4±7.7	<0.001	4.5±0.3	7.1±0.5	<0.001
归红液组	16	29.0±3.6	31.6±4.2	<0.5	4.2±0.3	4.8±0.4	>0.2
两组比较(P)		>0.05	<0.002		>0.05	<0.002	

二、当归液和红花液与溶酶活性：表2显示实验前，生理盐水组、当归组、红花组 β -葡萄糖醛酸酶和组织蛋白酶D活性接近($P>0.05$)。注ET后4小时，生理盐水组 β -葡萄糖醛酸酶和组织蛋白酶D活性前后均

有显著差异($P<0.05$)。当归组和红花组，注ET前后的差异均无统计意义($P>0.05$)，然而注后4小时， β -葡萄糖醛酸酶和组织蛋白酶D与生理盐水组比无统计意义($P>0.05$)。

表2 当归液、红花液对内毒素血症兔血清溶酶活性的影响(M±SE)

	动物数	β -葡萄糖醛酸酶(U)			组织蛋白酶D(U)		
		ET前	ET后4小时	P	ET前	ET后4小时	P
生理盐水组	5	37.6±6.2	136.6±36.7	<0.05	4.7±0.6	9.6±1.6	<0.05
当归组	5	34.3±2.4	48.8±8.1	>0.1	4.5±0.8	5.5±0.4	>0.3
红花组	5	36.0±5.2	64.8±18.1	>0.2	4.7±0.2	8.2±1.5	>0.05

表2说明当归液和红花液对ET引起的血中溶酶升高也具有一定的阻遏作用。

三、归红液在体外与溶酶活性：取相同未给内毒素健康兔血清，分别加0、50、75、100 μ l归红液于基质液中保温，结果见表3。

表3 归红液在体外对溶酶活性的影响(M±SD)

归红液含量(μ l)	样本数	β -葡萄糖醛酸酶(U)	组织蛋白酶D(U)
0	5	32.4±5.4	4.6±0.2
50	5	31.2±2.7	4.5±0.2
75	5	31.2±6.2	4.4±0.3
100	5	30.0±6.3	4.9±0.4

表3说明归红液不同剂量之间的 β -葡萄糖醛酸酶和组织蛋白酶D活性均无明显差异($P>0.5$)，提示归红液在体外对溶酶活性并无直接影响。

讨 论

在正常情况下，溶酶体膜具有一定的稳定性。不论何种原因引起的休克晚期，都导致溶酶体膜损伤。据报道，内毒素休克时血中 β -葡萄糖醛酸酶和组织蛋白酶D活性均明显升高⁽⁴⁾，本文结果与国内外学者的研究结果是完全一致的。一般认为是由于休克时缺血、缺氧、酸中毒损伤溶酶体膜。新近许多工作表明，内毒素激活补体，激活的补体成分(特别是C5a)又激活粒细胞，粒细胞产生大量自由基，自由基损伤单位膜脂⁽⁵⁾，这可能是休克时溶酶体膜受损，从而导致血中溶酶升高的主要原因之一。

国内外学者都十分重视溶酶体膜稳定剂的寻找和研究，并取得一定成果。我国从药源丰富的中草药寻找溶酶体膜稳定剂对防病治病是有意义的。从表1结果证明归红液确实具有阻遏内毒素血症血清溶酶活性水平升高的作用。在单味当归、红花与生理盐水比较中，当归与红花对溶酶活性虽均显示一定抑制作用，但作用远较归红液为弱，这提示归红液阻遏内毒素血症血清溶酶活性的升高，可能为当归与红花的协同作用。而这种阻遏作用不是归红液对血清溶酶的直接抑制作用，这由表3的实验结果可资证明。至于归红液为何具有这种作用，它的有效成分是什么，目前尚不明确。体外试验证明红花醇溶性成分具有抗凝作用，还能降低RBC聚集性，使血液粘度减少。红花和当归都能抑制ADP与胶原诱导的血小板聚集以及明显地抑制血栓形成，且对外周血管都能促使其显著扩张⁽⁶⁾。由此可见，红花与当归可能通过抑制血小板聚集和血小板聚集和血栓形成以及扩张血管作用，改善内毒素引起的微循环障碍，从而稳定溶酶体膜，阻遏了血中溶酶活性升高。值得特别指出的，根据中医理论，当归养血活血，红花活血祛瘀。据报道，中医常规治疗某些肝病⁽⁷⁾、肾病⁽⁸⁾、心肌疾病⁽⁹⁾、过敏性疾病⁽¹⁰⁾、红斑性狼疮⁽¹¹⁾，常加当归、红花，奏效快，疗效高，这是否与当归、红花能降低血中溶酶水平有关，应进一步观察。

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中西医结合治愈肺肾综合征合并胸膜炎1例报告

烟台解放军第107医院 吕曙光 张杰民

病历摘要 患者张×, 男, 32岁。因发冷、发热、胸痛5天, 咯血3天, 尿血2天, 于1983年12月7日入院, 住院号30442。

患者于5天前无明显诱因发冷、发热, 两侧季肋部剧烈针刺样疼痛, 深吸气加重, 胸闷, 呼吸困难。发病第3天开始咯血, 每天3~5次, 色暗红。翌日多次尿血, 暗红色, 伴腰痛酸楚, 以右侧为著, 小便频数, 尿道烧灼样痛。无恶心呕吐, 大便秘结。

查体: 体温38.8°C, 脉搏96次/分, 呼吸18次/分, 血压110/80mmHg, 急性病容, 神志清, 表情痛苦, 皮肤无黄染、皮疹和出血点, 表浅淋巴结不肿大。眼睑无浮肿, 咽部轻度充血。双肺呼吸音粗糙, 双侧腋窝及胸膜摩擦音。双侧肾区压痛、叩击痛(+), 以右侧为著。血检查, 红细胞468万, 血色素12g, 白细胞15,100, 中性91%, 血小板27.8万。血沉45mm/h; 尿常规: 酱油色尿, 酸性, 蛋白+++ , 白细胞+, 红细胞++, 管型3~8个/LP。尿卟啉试验阴性; 酚红排泄试验共计25%; 肾盂造影未见异常。X线胸片示: 双肺门阴影增强, 肺纹理粗重, 两下肺有絮状模糊阴影, 两侧肋膈角均示胸膜增厚粘连。诊断: 肺肾综合征并胸膜炎。

治疗经过 病人入院后用青霉素、氨基苄青霉素、链霉素、石城白药、止血敏等治疗10天, 体温仍在38~40.2°C之间, 咯血、尿血、胸痛等症无好转。血色素降至9.8g, 尿素氮升至26mg, 病人滴水不

进, 恶心, 大便秘结, 出现尿毒症的症状, 故采取中西医结合治疗。中医辨证: 病人发热半月, 胸肋锐痛, 咯血尿血, 腰痛腿软, 恶心纳呆, 大便秘结, 舌质红, 苔薄黄, 脉浮数。证属肺热壅盛, 热结下焦。治以清热泻火, 凉血止血。方药: 双花30g 鱼腥草30g 连翘15g 生石膏60g 桑白皮12g 板蓝根30g 桔梗12g 血余炭20g 藕节炭15g 侧柏炭15g 茅根15g 大黄9g。服3剂热退, 胸痛减轻, 咯血减少, 大便通畅, 纳谷已馨, 白细胞恢复正常。上方去石膏、大黄, 加黄芪30g 太子参15g, 益气养阴, 扶正祛邪, 治疗一个月, 胸痛、咯血等症悉平, 复查胸片示: 双下肺呈条索状阴影, 两侧肋膈角消失。腰痛尿血如故。尿常规: 酱油色尿, 蛋白++, 红细胞++~++++。加用强的松20mg, 每日上午8时一次服, 环磷酰胺0.2g加入10%葡萄糖液250ml隔日静滴一次。中医辨证: 病人尿血日久, 脾肾两虚, 脾虚不能统血, 肾虚失于封藏, 故症见腰痛腿软, 神疲乏力, 面色萎黄, 头晕耳鸣, 小便频数, 色暗红, 舌质淡, 脉搏沉细尺弱。治以补肾健脾, 凉血止血, 利尿通淋。方药: 黄芪30g 党参15g 山药15g 白术15g 云苓12g 生地30g 旱莲草15g 川断9g 桑寄生15g 茅根15g 小蓟30g 琥珀4.5g(冲服)。治疗两个月, 腰痛减轻, 小便转清, 尿常规检查蛋白阴性, 红细胞少许, 尿素氮恢复正常, 酚红排泄试验共计55%。血色素升至13.5g。停药观察, 病情稳定, 康复出院。

Twenty-Four Cases of Renal Syndrome Complicated with Nitremia Treated with TCM-WM Combined

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Twenty-four cases of renal syndrome treated with TCM-WM combined are reported. Fifteen of the number suffered from uremia with established diagnosis. The therapeutic results are as follows: 19 showed significant effect, 3 showed moderate effect, 2 proved to be failure.

The prescription was modified to meet the requirement of various conditions. Significant effect was observed in 3 cases treated with modified Yi Shen Fang (益肾片, Kidney-Replenishing Prescription). The other cases were treated with steroid or cytotoxic drugs. The "mixture diuretic compounds" (10% glucose 300-500 ml, lasix 100-200 mg, rigiline 20-40 mg, dexamethasone 10-20 mg) were added to treat patients with oliguria and anuria. Heparin and/or persantine were used for patients with the condition of hypercoagulation. If powerful diuretics were not effective for the patients with oliguria, general or pulmonary edema, Dahuang Fuzi Tang (大黄附子汤, Rhubarb and Prepared Aconite Root Decoction) was added to warm Yang and dispel turbidity, and purgatives were used for edema. The effect of diuretics could be achieved after a large quantity of water had been eliminated. In clinical practice, good therapeutic result could be obtained if the combined TCM-WM method is employed. By so doing, the critical condition of some "incurable" diseases could be relieved.

(Original article on page 550)

Observation on the Therapeutic Effects of Sheng Wei Ning (生胃宁) Tablets on Peptic Ulcer

—An Analysis of 199 Cases

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The present study includes an analysis of 199 cases of peptic ulcer which were divided into 3 groups: 88 cases treated with Sheng Wei Ning tablets, 51 cases treated according to TCM typing and 60 cases treated with carbenoxolone. The clinical findings of these 3 groups were quite similar, hence they were comparable. All patients were examined with stomach fibers endoscope both before and after every course of treatment. The mean duration of treatment, percentage of cure and percentage of recurrence within 5 years were 30.3 days, 80.68% and 34.09% respectively in the first group; 39.6 days, 54.9% and 56.52% in the second group; and 32.2 days, 68.3% and 60% in the third group.

The first group showed shorter duration of treatment, higher cure rate and lower recurrence rate, and all their differences are statistically significant ($P < 0.01$). Animal experimentation confirmed also that the therapeutic effects on experimental gastric ulcer in rats had similar results. Sheng Wei Ning tablet contains both carbenoxolone and furazolidone; however, its side effects were only 5.6%, as compared with 33.3-45.6% of the two latter drugs when used separately. The data reveals that treatment of peptic ulcer with TCM-WM has great advantage over treatment with TCM or WM separately.

(Original article on page 553)

A Study of Rhubarb's Constituents and the Mechanism of Their Hemostatic Effect

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Two constituents: catechin and gallic acid extracted from Rhubarb have been tested with 18 indices in 11 normal volunteers for the purpose of making clear the mechanism of their hemostatic effect. It has been found that both of them can enhance the functions of PAdT and PAgt, which is beneficial for thrombosis. Furthermore, these constituents can also reduce the activity of AT-III and gallic acid is able to raise the level of α_2 -MG and slow down fibrinolytic process, which could promote blood coagulation and cause hemostasis.

(Original article on page 555)

Influences of *Angelica Sinensis* and *Carthamus Tinctorius* Mixture on Serum Lysosomal Enzymes in Rabbits with Endotoxemia

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Using serum β -glucuronidase and cathepsin D activity as indices, the changes of both enzymes during endotoxemia and the effects of *Angelica sinensis* and *Carthamus tinctorius* and their mixture on their activity levels were observed.

The experiment was carried out in two groups: normal saline group (18 rabbits and mixture of *Angelica sinensis* and *Carthamus tinctorius* (AC group) (16 rabbits). The serum lysosomal enzyme levels were determined