

生脉注射液治疗感染性休克

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为了探索感染性休克新的治疗措施,我室应用生脉注射液治疗 24 例感染性休克患者,发现在稳定及回升血压、促进病情好转、改善全身机能状态等方面均有较好的疗效,报告如下。

一般资料

24 例中,男性 14 例,女性 10 例。年龄最大 71 岁,最小 18 岁。原发病有:大肠杆菌败血症 6 例;金葡败血症 1 例;变形杆菌败血症 1 例;休克型肺炎 5 例;支气管肺炎 3 例;急性梗阻性化脓性胆管炎 3 例;肺心病急发 5 例。全部患者均有不同的器官损害:计心 14 例、肺 16 例、肾 7 例、肝 6 例。并发症有:中毒性肝炎 3 例、中毒性心肌炎 9 例、中毒性菌痢伴急性肾功衰竭代谢性酸中毒 1 例、DIC 3 例、中毒性心肌炎伴急性左心衰 1 例、肺脑 1 例。全部病例的诊断均有 1. 有导致休克的感染性疾病为基础; 2. 病程中有循环衰竭、血压下降及其他休克的临床表现。用药前持续休克时间最短半小时,最长 6 天。一般在 2 天以下较多,共 18 例。

治疗方法

生脉注射液每 10 毫升含生药红参 1 g, 麦

冬 3.12g, 北五味 1.56g。首剂给生脉注射液 10~20ml (5~10 安瓿) 加入 5~10% 葡萄糖注射液 10~20ml 稀释后静脉推注,必要时半小时至 1 小时后重复推注。以后改为生脉注射液 20~40ml, 个别患者 100ml, 加入 5% 葡萄糖注射液中静脉缓慢滴注。一般日总量为 40~100ml。仅 1 例患者用量达 420ml。疗程在 1 天以内 15 例, 用量 20~300ml/天; 疗程 2 天患者共 6 例, 用量为 20~80ml/天; 疗程 3 天共 2 例, 用量为 20~40ml/天; 疗程 14 天 1 例, 用量 20ml/天。

本组病例在使用生脉注射液时, 均同时采用抗感染、扩容、纠酸、激素, 必要时吸氧、物理降温等措施。8 例患者配合使用了强心剂, 3 例合并有 DIC 的患者配合使用了丹参复方注射液, 3 例高热患者配合使用了紫雪丹, 4 例慢性肺心病急发患者在血液生化及血气分析的监测下采取了纠正电解质、降低脑水肿及改善通气、换气功能等综合措施。

治疗结果

一、应用生脉注射液等综合措施的疗效

(见表 1)。

表 1 应用生脉注射液等综合措施的临床效果

临床情况 治疗前后	气促	冷汗	肢厥	皮肤花斑	唇指发绀	烦躁	昏迷	呼吸 >20 次/分	心率 >100 次/分	收缩压 <80 mmHg	无尿或 和少尿	CVP <4mmH ₂ O
治疗前例数	17/23	4/10	17/21	1/13	20/22	8/16	7/14	19/24	21/24 △	21/24 ★	17/22	4/4
治疗后例数	8	0	0	0	5*	0	0	0	6	0	0	0

注: 分母为检查例数。*, 其中 4 例为肺心病, 1 例合并冠心病。△: 其中 11 例脉细欲绝。★: 另外 3 例原有高血压, 此时收缩压虽在 90mmHg 以上, 但比原有收缩压有明显下降。

24 例中 7 例患者未用血管活性药物, 17 例患者在使用生脉注射液以前使用了间羟胺、多巴胺等药物血压未能稳定, 加用生脉注射液而获得协同的升压和稳压的效果, 其中 2

例 (1 例休克型肺炎、1 例大肠杆菌败血症) 系在单独使用多巴胺等药时血压不能稳定, 加用生脉注射液有明显好转然而分别在血压稳定 2 小时、40 小时后又抽去多巴胺而单独用生脉

注射液获得稳压效果的。

二、应用生脉注射液等综合措施后血压恢复情况(见表2)。

表2 应用生脉注射液等综合措施后血压恢复情况

血压 恢复 例数	时间 (分钟)	<20	20~30	31~60	61~120	121~240	241~360	360以上
		3	3	7	2	5	2	2

从表2可见使用生脉注射液等综合措施后,血压恢复正常时间最短20分钟,最长480分钟,其中15例在120分钟内恢复正常。

本组患者获得稳压效果的17例,升压效果的7例。前者是在用血管活性药物效果不好的情况下加用生脉注射液后达到稳压,进而升压的效果。其余7例是在未用任何血管活性药物的情况下获得升压效果的。

讨 论

一、生脉散常应用于热伤元气、阴津大伤之气阴两虚之证。我院药学系遵照古方的拟方原则,改革工艺,稳定流程,克服了溶血反应,并研究以薄层层析——比色法测定有效成分——人参皂甙含量的条件,提出了含量限量指标,制定了药品质量标准,全方制成可供静脉使用的注射液。这种既忠实于古方沿革的传统,又结合了现代药物剂型改革的研究,对发掘、整理、提高祖国医药学遗产,阐明其作用原理是十分必要的。

二、从本组未用血管活性药物而单独使用生脉注射液获得升压效果的7例来看,生脉注射液对感染性休克患者的升压效果是明显的。另17例也是在使用血管活性药物疗效不显的情况下加用生脉注射液后获得疗效,说明生脉注射液在这些综合治疗措施中也发挥了一定的积极作用。分析本组单独使用生脉注射液的7例患者,其中4例为休克型肺炎,3例为脓性胆管炎。这些患者病程较短,全身内脏器官的损害相对较轻,心脏功能相对尚可;另17例患者中,1例原有冠心病,2例为肺心病合并心源性肝硬化,8例合并有中毒性心肌炎(其中1例合并左心衰),1例原有慢性肾功能不全,

3例合并中毒性肝炎,2例为70岁以上支气管肺炎,看来,单独使用生脉注射液疗效的获得,除了生脉注射液本身的作用外,与全身的状况,尤其是重要器官的状况有明显的关系。

在处理感染性休克时,除了采取强有力的措施针对病原因子及其在病程发展中所造成的内环境紊乱外,如何调动全身网状内皮系统的功能,增强防御机制,是不可忽略的。观察本组患者,发现生脉注射液有单独或协同的升压作用外,并能明显改善全身症状。本组有17例出现少尿或无尿,使用生脉注射液后能使尿量增加,对于预防急性肾功能衰竭,能起到一定的作用;另1例大肠杆菌败血症、中毒性休克伴发严重腹泻的患者,在无特殊处理的情况下,使用生脉注射液后,腹泻明显好转;再有6例患者冷汗不止,其中4例四肢发凉、1例“漏汗”淋漓不尽、使用生脉注射液后10分钟逐渐好转,半小时至1小时汗出停止、四肢转暖。从这些情况看来,生脉注射液在治疗感染性休克中所发挥的作用是较为全面的、综合的。

三、生脉注射液经我院综合研究、基础实验,表明其药理作用具有:抑制毛细血管通透性的非特异性抗炎作用;对IgE抗体介导的体液免疫有一定的抑制作用;对细胞免疫具有促进作用;能增强机体对缺氧的耐受力;对正常和荷瘤动物的网状内皮系统(RES)均有明显的激活作用;能对抗内毒素所致RES吞噬功能的抑制;对抗内毒素所致动物的腹泻;减轻内毒素对机体的毒性;能激发肾上腺皮质功能。并委托国外药理学者进行的对于心肌细胞及心血液动力学等方面的研究,结果表明:生脉注射液有增进冠状动脉血流量的作用;有增加心肌收缩力的效应;有抑制大白鼠心肌细胞三磷酸腺苷酶活性的作用;在小剂量时可减低心肌细胞的耗氧量,在急性、大剂量、高浓度、快速给药时血压有所下降,而血压下降的作用能被儿茶酚胺药物对抗。这些药理作用与临床疗效的初步观察是吻合的,为生脉注射液在抢救感染性休克患者的临床应用方面提供了一定的药理基础。

Abstracts of Original Articles

Strengthen the Lung by Way of Tonifying the Kidney in the Management of Status Asthmaticus

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The mortality rate of status asthmaticus documented in the medical literature is 9-38%. Twelve patients with 16 attacks including one case of respiratory arrest all survived after the use of Ginseng-Gecko powder (参蛤散) and Ginseng-Walnut decoction (人参胡桃肉汤) in combination with steroids, bronchodilators and antibiotics. Among the group, there were 7 females and 5 males, aged 18-59 years, course of illness averaging 13.4 years. The attacks persisted from 24 hours to 7 days, having a mean of 4.2 days. They all exhibited severe dyspnea, marked cyanosis and profuse sweating, and one had transient respiratory arrest. After the use of hydrocortisone averaging 220mg/day (11 occasions), dexamethasone averaging 9mg/day (5 occasions), ACTH 25u/day (7 occasions), and large doses of bronchodilators and antibiotics failed to bring about any remission, medicinal herbs were added. Differentiation of symptom-complexes in TCM: revealed 7 cases of cold asthmatics and 5 cases of hot asthmatics, all of which exhibited varying degrees of deficiency in the vital function of the kidney (肾阳虚).

Prescription: (1) Ginseng 10gm and a pair of gecko decocted and administered once daily; (2) Ginseng-Walnut decoction, 10gm for each ingredient once daily. Other herbs were given in addition for the enhancement of anti-heat, antiasthmatic and expectorant effects, in accordance with the symptom-complex manifested in each patient. Results: 56% were brought under control, 19% markedly improved and 19% improved, making a total effective rate of 94%. The effectiveness was apparent in 1-4 days. Concomitantly, the general status also appeared markedly improved.

According to the theory of TCM, the development of asthma is initiated as the vital function of the lung, spleen and kidney is deteriorating. If it lasts persistently and sufficiently long, all patients would show deficiency of vital energy of the kidney. Ginseng restores the vital energy, enhances the resistance to stresses, modulates the function of central nervous system, relieves excess stimulation from neurotransmitters released during the attack and eventually restores the normal response of the organism. Gecko and walnut both have the action of warming the kidney and reinforcing its vital function. The authors highly advocate its use in combination with the steroids in achieving remission of status asthmaticus.

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Shengmai Injection in the Treatment of Infectious Shock

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This is a report of therapeutic efficacy of Shengmai injection in the treatment of 24 patients with clinically confirmed infectious shock. Shengmai injection prescription prepared by the department of pharmacy of Sichuan Medical College is similar to the composition of an ancient TCM prescription. It includes: *Panax ginseng* 1gm; *Liriope spicata* 3.12gm; and *Schisandra Chinensis* 1.56gm. The injection was given intravenously 40-100ml per day for one or two days either singly or in combination with other medicine. Following medication, stabilization and increase of blood pressure as well as functional improvement of other organs were observed. Of all the patients, 17 cases which had been irresponsive to vascular activators showed stabilization and elevation of blood pressure after the addition of Shengmai injection. In the remaining 7 cases in which Shengmai injection was given singly, similar results were obtained. Pharmaceutical studies revealed that the effects of Shengmai injection include: anti-inflammatory effect; anti-toxic effect; decrease of capillary permeability; enhancement of cell-mediated immunity; inhibition of IgE-mediated immunity; stimulation of adrenocortical function; elevation of hypoxic endurance; activation of reticulo-endothelial system; and effects on myocardium and hemodynamics. The actions mentioned above will contribute to a further application of this injection in clinical practice.

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