

补气益肾通淋法治疗L型 细菌尿路感染10例

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内容提要 本文介绍经清洁尿L型细菌培养,获得确诊的10例不同L型细菌尿路感染患儿,采用中药补气益肾通淋法治疗,总疗程6~10周,近期疗效7例痊愈,3例好转;经6~12个月随访观察,疗效巩固,好转中仅1例又培养出L型大肠杆菌。

L型细菌是细菌变异过程中因细胞壁缺陷而产生的变异型菌⁽¹⁾。由于细胞壁缺陷,渗透性发生改变,普通培养往往阴性,而高渗培养生长良好⁽²⁾。我们对经尿液L型细菌培养确诊为尿路感染的10例患儿,用中药补气益肾通淋法治疗,获得较佳疗效,现报告如下。

临床资料

一、一般资料:本组10例中男1例,女9例,年龄最小6个月,最大13岁,平均6岁半;病程最短1周,最长8个月,平均3个月。所有患儿在发病前均使用过青霉素类药物。

10例均有尿频、尿急、尿痛症状;其他有低热者5例,乏力者6例,纳减者4例,消瘦者3例,浮肿者1例。

二、实验室检查:10例尿常规检查,在细菌尿路感染时8例有显著变化,尿蛋白+~++++,红细胞+~++++,白细胞+~++++;2例尿蛋白阴性~微量,红、白细胞均不到+。当确诊为L型细菌尿路感染时,2例肾结核伴发L型细菌尿路感染,尿蛋白为+、++++,白细胞为+、++;另8例尿蛋白均阴性,红细胞0~极少数,5例白细胞在0~3/HP,3例白细胞在2~5/HP。

L型细菌培养:将清洁尿0.1ml直接接种于改良Kagan L型细菌培养基上,置10%CO₂环境,连续观察3天,典型的L型细菌有“油煎蛋样”、颗粒型、丝状型3种菌落,菌体革

兰氏染色阴性,呈多形态⁽³⁾。本组10例L型细菌尿路感染的诊断均经2次L型细菌培养阳性确立。其中大肠埃希氏菌L型尿路感染3例,表皮葡萄球菌L型、枸橼酸杆菌L型、紫癜性肾炎继发大肠埃希氏菌L型、急性肾炎继发大肠埃希氏菌L型、肾结核伴发变形杆菌L型、肾结核伴发肾盂积水及表皮葡萄球菌L型、重肾双输尿管畸形伴金黄色葡萄球菌L型尿路感染各1例。10例在L型细菌培养的同时送验普通培养,结果8例阴性,仅2例分离出亲株菌。

治疗方法

10例患儿中2例肾结核伴发L型细菌尿路感染采用抗痨西药(链霉素每天15mg/kg,1个月;雷米封每天10mg/kg口服,1~1 $\frac{1}{2}$ 年;利福平每天10mg/kg口服,3个月)加中药治疗2个月。1例大肠埃希氏菌L型尿路感染口服红霉素片(每天30mg/kg,7天)加中药2个月外,其他7例不同L型细菌尿路感染均单独采用中药治疗。由细菌型变异成L型,一般病程较长,本组平均为3个月,此时正气受损,留邪未尽,中医辨证:脾肾两虚兼有下焦湿热。治则:补气、益肾通淋。基本方:黄芪12g 党参10g 茯苓10g 菟丝子10g 金樱子10g 牛膝8g 金钱草12g 篇蓄10g 山栀8g。随证加味:气阴两虚加太子参、生地各10g;肾阳不足加附子、桂枝各6g;下焦湿热重加瞿麦、

黄柏各8g。上述剂量为学龄前儿童(4~7)剂量。学龄儿童、婴幼儿酌情加减。服法与疗程:每日1剂,水煎分两次服;2周为1个疗程,一般服3~5个疗程,两疗程间停药2~3天。

结 果

一、疗效标准:治愈:尿L型细菌培养阴性,临床症状消失,尿常规检查完全正常。好转:尿L型细菌培养阴性,临床症状减轻,尿常规检查完全正常,或临床症状消失,尿常规检查白细胞3~5/HP。

二、结果:本组痊愈7例,好转3例(包括2例肾结核伴发L型细菌尿路感染)。经6~12个月随访观察,7例痊愈者疗效巩固,仅好转中有1例反复培养出大肠埃希氏菌L型。

讨 论

一、L型细菌有许多特征与原菌不同,如呈多形性、渗透性改变,对抗生素的敏感性改变等,过去认为有致病力的细菌变成L型细菌后即不致病⁽⁴⁾。近年来报道从患者脓液、心包腔、脓肿、血液、尿液等处分离出L型细菌,从而证实其具有致病性^(5,6)。致病的原因与L型颗粒的非特异性刺激、细胞壁残留部的内毒素及L型细菌的返祖有关⁽³⁾。L型细菌的毒力和生存均较原菌为弱,如体内免疫系统不全时,它可隐藏体内对有关器官造成炎症损害,当宿主防御机能加强时,L型细菌则可通过免疫机制而被消灭⁽⁷⁾。泌尿系统L型细菌感染发病率高是由于在尿液形成过程中,原尿经肾小管再吸收而逐渐浓缩,造成肾髓质内的高渗环境,为L型细菌产生、存活创造了条件⁽⁶⁾。Kleeman尸检发现有慢性肾盂肾炎病变者生前漏诊率高达83.4%,可能与L型细菌感染有关。本组10例L型细菌感染,其特点有尿频、尿急、尿痛等症状,但尿检基本正常。

二、L型细菌感染的治疗:青霉素类、头孢霉素类等作用于细胞壁的抗生素无效;红霉

素、氯霉素能抑制细胞质内蛋白质合成故有效,但有些作者观察,疗效亦不理想。临床上对L型细菌尿路感染常因漏诊、误治而致慢性经过,其原因包括忽视L型细菌的培养,患者因缺乏客观指标而不重视,对抗生素产生抗药菌株、副作用及使用抗生素的恐惧等因素。

三、由于L型细菌在体内的生成、致病与机体的免疫状况有关,本组患儿采用补气益肾、清热通淋的中药治疗,方中黄芪、党参、菟丝子、金樱子等补气益肾中药通过提高细胞免疫功能(Ts值及淋巴细胞转化率、巨噬细胞吞噬能力),从而消灭L型细菌;还可增进食欲、促进吸收、改善症状及强健体质;方中金钱草、篇蓄、山栀、黄柏等清热通淋中药,一方面具有抗菌消炎、直接抑制或杀灭L型细菌的功能,另一方面尚可消肿利尿,改善肾功能,标本兼顾,虚实同治,疗效较为满意。本组10例不同L型细菌尿路感染,采用中医辨证施治,近期疗效甚佳,远期随访7例痊愈者疗效巩固,3例好转者疗效亦属理想。提示采用中医补气益肾通淋法,对不同L型细菌尿路感染均有效。

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Therapeutic Effect and Experimental Study of Yupingfeng Powder(玉屏风散) in Treating Chronic Renal Failure with Infection

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The patients of chronic renal failure are susceptible to infection which may cause the abrupt deterioration in disease and renal function. In present study, Yupingfeng Powder (YPFP) was used to treat chronic renal failure with infection (group I) in comparison with antibiotics (group II) and the changes of blood trace elements and immune function were monitored before and after the treatment. In group I, there were 27 cases, aged 21~58 years with an average of 37.5 years. BUN was 50.1 ± 12.3 mg/dl, Cr 4.09 ± 0.65 mg/dl, Hb 6.7 ± 1.1 g/dl. The YPFP composed of *Saposhnikovia divaricata*, *Astragalus membranaceus* and *Atractylodes macrocephalus*, 30 g each, these were decocted in water and divided into two oral doses each day for three weeks. In group II, there were 10 patients, aged 31~48 years with an average of 36.2 years. BUN was 49.9 ± 13.5 mg/dl, Cr 3.8 ± 0.8 mg/dl, Hb 6.5 ± 0.7 g/dl. For infection of upper respiratory tract, 3g ampicillin was administered by intravenous drip each day for 1~2 weeks. For urinary tract infection, SMZ-TMP tablets were administered, 2 tablets once a day, for 3 weeks. The anti-infectious effective rate was 74% in group I, which was similar to that of group II, while the recurrence rate of infection within 3 months in group I was lower than that of group II. After treatment, BUN was decreased for 40% and 13%, while Cr was decreased for 30% and 13% in the group I and II respectively. The serum Zn content showed a reduction of 28.4 μ g/dl and 26.6 μ g/dl respectively as compared with the healthy control. After treatment Zn level in the group I was increased markedly, almost to the normal level, while it had a slight decrease in group II. T Lymphocyte percentage was decreased in chronic renal failure patients, but increased markedly in YPFP treated group I, and it was not increased in antibiotics treated group II after treatment. The results show that YPFP have a good effect on chronic renal failure with infection and it could markedly elevate the low Zn content in patients and improve immune function, which might be the mechanism of pharmacology of YPFP.

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10 Cases of L-Form Bacteria Urinary Tract Infection

Treated with Replenishing Qi(气), Tonifying Kidney and Relieving Stranguria

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The L-form bacteria are the bacterial variants due to the bacterial wall defect. It was found that the L-form bacteria could cause infection, and the bacterial culture usually turned out to be negative. The L-form bacteria were isolated from the urine specimens of 10 children with dubious urinary tract infection by means of modified Kagan L-form plate media. Among 10 cases, 5 were L-form *Escherichia*, 2 *Staphylococcus epidermidis*, 1 *Citrobacter* species, 1 *Proteus* and 1 *Staphylococcus aureus*. All patients were characterized by the microscopic examination of urinary sediment, polyuria, urethralgia, etc. Early examination of urine revealed abnormal. When the bacteria changed into L-form bacteria, some clinical symptoms still remained, but urine examination showed basically normal. All children with L-form bacteria urinary tract infection were treated with herbal drugs of replenishing Qi, tonifying Kidney and relieving stranguria. The total course of treatment was 6 to 10 weeks. Results: 7 cases were cured and 3 improved. 6~12 months follow-up revealed that 7 cases were completely cured and only one patient had a positive culture of L-form *Escherichia*.

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