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世界中医药学会联合会

World Federation of Chinese Medicine Societies

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国际中医技术操作规范
肠道灌洗技术治疗慢性肾脏病 3-5 期
International Standardized Manipulations of Chinese Medicine
Intestinal Lavage Technique for Chronic Kidney Disease Stages 3 - 5

(征求意见稿)

(Committee Draft)

世界中联国际组织标准
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前 言

请注意本文件的某些内容可能涉及专利。本文件的发布机构不承担识别专利的责任。

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引 言

慢性肾脏病是全球重要的公共卫生问题，严重威胁着人类的生命健康和生活质量。由于慢性肾脏病被称为“隐匿的杀手”，肾脏具有较强的代偿功能，患者处于慢性肾脏病 1-2 期时，并不会表现出明显不适症状，但进入 3 期后，由于毒素在体内大量堆积，肾脏代偿功能下降，诸如恶心呕吐、疲倦乏力、睡眠障碍、腰酸腰痛等不适症状出现，迫使患者就医从而被发现并确诊为“慢性肾脏病”。慢性肾脏病 3-5 期非透析期患者，由于肾脏代谢异常，临床上主要表现为水、电解质和酸碱平衡失调，毒素蓄积而引起的一系列全身中毒症状，病死率近年来逐步上升。而当慢性肾脏病进展至终末期时，则需要进行透析或肾移植治疗，将产生更多的并发症、更高的死亡率及更重的医疗负担。

目前，现代医学对于延缓慢性肾脏病进展的治疗措施一般围绕治疗原发病、控制血压、蛋白尿等危险因素，以及对症处理等，方法较少，因此现在迫切需要发展更多能够有效治疗慢性肾脏病的手段。

中医认为，湿浊瘀毒内蕴几乎是所有慢性肾脏病患者的共同特征。肠道“受五脏浊气，为传化之府，此不能久留，输泻者也”，故称传导之官，因此“通腑泄浊”是贯穿慢性肾脏病治疗始终的重要方法，此即《黄帝内经》中提出“洁净府”的治法。中药肠道灌洗正是基于“通腑泄浊”法而形成的一种中医特色疗法，目前随着临床证据的积累，该方法治疗慢性肾脏病 3-5 期非透析患者的安全性及有效性也已得到初步验证。其治疗原理主要表现在两大方面：一是人体结肠粘膜的性质同半透膜，可调控肠腔液中电解质、活性物质等交换，使用中药结肠透析有助于协助肾脏排除体内毒素；二是慢性肾脏病患者存在肠道菌群失调，中药结肠透析可通过调节肠道微生态、改善免疫紊乱等作用，对慢性肾脏病 3-5 期非透析患者起到良好的治疗效果。

目前尚未有针对慢性肾脏病 3-5 期非透析期的肠道灌洗技术标准，但随着中药肠道灌洗技术的不断更新、改进、完善和发展，该技术愈发成熟，为更好地推广中药肠道灌洗在慢性肾脏病 3-5 期非透析患者中的应用，规范中药肠道灌洗技术的操作规范，确保中药肠道灌洗技术的应用安全性与疗效，特制定本文件。

国际中医技术操作规范

中药肠道灌洗技术治疗慢性肾脏病 3-5 期

1 范围

本文件规定了肠道灌洗技术治疗慢性肾脏病 3-5 期技术操作规范的术语和定义、器具要求、操作步骤、注意事项等内容。

本文件适用于对慢性肾脏病 3-5 期患者进行肠道灌洗的操作。

2 规范性引用文件

下列文件中的内容通过文中的规范性引用而构成本文件必不可少的条款。其中，注日期的引用文件，仅该日期对应的版本适用于本文件；不注日期的引用文件，其最新版本（包括所有的修改单）适用于本文件。

GB/T 20348-2006 中医基础理论术语

ISO 14971-2007 医疗装置 医疗装置风险管理的应用

3 术语和定义

下列术语和定义适用于本文件。

3.1

肠道灌洗

通过在结肠内建立一个有效的灌注、排泄的装置，充分利用结肠黏膜的半渗透性特点，使中药透析液与肠黏膜组织毛细血管间进行弥散、渗透和交换，从而达到清除体内代谢废物或毒素，纠正水、电解质、酸碱失衡的目的的操作。

3.2

低位肠道灌洗

通过肛门插管至肠道一定位置，注入适量液体和药物，达到清洁肠道、刺激排便或药物治疗的目的。

3.3

高位肠道灌洗

通过肛门插管至肠道深处，注入适量液体和药物，达到彻底清洗肠道，排出体内毒素，改善便秘，纠正腹泻，调节肠道菌群失调，预防肠癌，并有美容，美肤，减肥，调节内分泌失调等作用的治疗方法。

3.4

一次性使用肛门管

通过肛门插入方式向结肠腔内灌注或引流排泄肠道灌洗液的导管。

3.5

一次性使用灌洗袋

与一次性使用肛门管连接并用于储存肠道灌洗液的密封液袋。

3.6

多用灌洗灌排装置

使用一次性使用肛门管和多用储液瓶相连接并通过球囊提供灌排动力的工具。

3.7

中药结肠洗液

由多种中药成分组成、用于肠道灌洗的中药液体制剂。

4 证候诊断

中药肠道灌洗技术治疗慢性肾脏病 3-5 期的证候诊断可参见附录 A。

5 肠道灌洗操作步骤

5.1 灌洗药物准备

5.1.1 灌洗药物选择

根据患者中医证型予以辨证选用灌洗药物。

5.1.2 治疗方案

辨证分型是使用肠道灌洗技术治疗慢性肾衰是临床中重要的辅助方法。建议从本虚证、标实证、虚实夹杂证开始着手，结合脏腑机能的不及和病理产物蓄积的太过而进行药物的加减。医生需根据临床实际及患者的个体情况确定药物剂量。

5.1.3 药物用量

5.1.3.1 低位肠道灌洗

取去渣中药液 200 毫升，加热至在 39-41 摄氏度为宜，将根据患者辨证选用的灌洗药物加入温水至 100-200ml 待用，倒入灌肠袋内，具体用量应根据患者耐受情况进行增减(1D)。

5.1.3.2 高位肠道灌洗

将灌洗药物和温水按照 1: 4-5 的比例混合至 2000ml (1D)。

5.1.4 灌洗药物温度

药物灌入温度应为 37.0℃-37.5℃ (1D)。

5.2 灌洗时间和频率

5.2.1 灌洗时间

5.2.1.1 经络辨证

17时至19时为肾经循行时间，此时进行肠道灌洗治疗有利于提高药物作用（1D）。

5.2.1.2 三餐时间

上午或下午的两餐之间也可进行肠道灌洗，此时进行治疗可减轻人体不适感，有利于药物吸收（1D）。

5.2.2 灌洗频率

5.2.2.1 低位肠道灌洗

每日宜进行一次肠道灌洗治疗，具体灌洗天数宜根据患者实际情况决定（1D）。

5.2.2.2 高位肠道灌洗

宜每日或隔天进行一次高位肠道灌洗治疗，具体灌洗天数可根据患者实际情况决定（1D）。

5.3 灌洗体位

将灌肠袋携至病人床旁，挂在输液架上，液面离肛门40-50厘米。嘱患者左侧卧位，松开衣裤，将裤脱至大腿上1/2处，膝屈曲位。臀下用小枕垫高10厘米，垫上治疗巾，注意保暖。弯盘置于臀缘，润滑肛管前端。

5.4 灌洗方法

5.4.1 灌洗前评估

5.4.1.1 了解患者既往病史，当前主要症状及不适，过敏史等；

5.4.1.2 操作前进行肛门指检，排查可能的禁忌证；

5.4.1.3 对患者意识状态、体质及肛周皮肤情况进行判断，决定是否可以进行治疗，并与患者签署治疗知情同意书。

5.4.2 灌洗前准备

5.4.2.1 仪表：着装整洁，佩戴胸牌，洗手，戴口罩

5.4.2.2 物品准备：备齐用物，如中药液，治疗盘，一次性使用灌洗袋，水温计，弯盘，石蜡油，棉球，治疗巾，卫生纸，治疗本

5.4.2.3 操作前准备：将物品携至床旁，向患者说明目的，取得配合，嘱病人排二便，遮挡病人

5.4.3 灌洗器具选择

5.4.3.1 低位肠道灌洗

使用多用灌洗灌排装置或一次性使用灌洗袋作为灌洗药物灌入的推进器。

5.4.3.2 高位肠道灌洗

使用多用灌洗灌排装置或一次性使用灌洗袋作为灌洗药物灌入的推进器。

5.4.4 灌洗器具置入深度

5.4.4.1 低位肠道灌洗

一次性使用肛门管经肛门置入肠道 15-20cm (1D)。

5.4.4.2 高位肠道灌洗

一次性使用肛门管经肛门置入肠道应大于 25cm (1D)。

5.4.5 灌洗步骤

5.4.5.1 选用合适的灌洗器具后，将灌洗药物灌入器具中。

5.4.5.2 用润滑液充分润滑其可置入肠道的肛管部分。

5.4.5.3 灌洗次数及保留时间

(a) 低位肠道灌洗：将灌肠袋排气，夹紧控制阀，润滑灌肠管前端，左手分开臀部，润滑肛门周围，右手持灌肠管插入，置入深度为 22-25 厘米，稍停片刻，固定，缓慢打开控制阀，调整灌肠液滴注速度 20-25ml/min，同时询问病人对药液滴入的反应。8-10min 药液滴完后，关闭控制阀，将灌肠管缓缓拔出，用卫生纸轻轻按压肛门，将一次性灌肠袋放入医疗垃圾桶，嘱病人卧位一小时。整理床单位，清理用物，洗手，记录灌肠液量，滴入过程、时间，病人反应及签名。

(b) 高位肠道灌洗：将肛管轻轻插入患者肛门达到目标深度后，固定肛管，确认灌洗药液温度适宜后，根据患者最大耐受程度将药液分次灌入患者体内，每次灌入后应将药液保留在体内 30min 或以上（具体时长根据患者耐受程度增减），保留结束后待排干净再进行下一次药液灌入，直至药液全部灌完后拔出肛管。

6 适应证

6.1 因多种原因未进行血液透析、腹膜透析治疗的慢性肾脏病 3-5 期非透析患者。

6.2 血液透析、腹膜透析适应症差、老年非透析期肾衰患者。

7 禁忌证

7.1 孕妇。

7.2 严重内痔、肛管粘膜炎症、有活动性出血的患者。

7.3 肛门、结肠、直肠手术后患者。

7.4 肠穿孔、肠坏死、腹膜炎、急性肠炎或消化道出血的患者。

7.5 人工肛门的患者。

7.6 未控制的严重心血管疾病、严重肝腹水、水肿的患者。

7.7 其他不适于结肠透析体位及要求的患者。

7.8 对结肠洗液或中药成分过敏的患者。

8 注意事项

- 8.1 操作过程中,应注意观察患者耐受度和神志,询问患者的感受,有无腹胀、腹痛及便意,当患者出现脉搏细速、面色苍白、出冷汗、剧烈腹痛、心慌等,应立即停止操作并报告医生。
- 8.2 药物注入完毕后,用卫生纸轻轻按揉片刻,包裹肛管反折轻轻拔出。
- 8.3 结肠透析治疗完成后,患者大便次数可能增加,应注意观察患者肛周皮肤情况,及时予以保护。
- 8.4 灌肠后观察:重点观察患者腹痛及排便情况,并采用 Likert 五级评分法对患者出现的不适症状进行评分:如出现腹痛或便意,指导患者放松情绪、深呼吸,延长药液保留时间;观察患者心率、血压等生命体征,出现意外情况及时向主治医师汇报。

9 中药保留灌肠优化处理

- 9.1 温度:灌肠液温度常规为 39-41℃;阳虚体寒者可设定至 40-44℃;若设置为比患者体温高 1-2 度,可减轻腹痛、肠鸣、即刻便意等反应,患者舒适度更高。
- 9.2 长度:常规置管深度为 15-25cm,增加到 30cm 可以使药液保留时间更长,吸收更充分。
- 9.3 保留时间:灌肠后保留 60min-90min 效果更好;灌肠后使用 TDP 灯照射腹部,可以延长留腹时间,减轻腹痛反应。
- 9.4 体位:灌肠后嘱患者每 15min 更换卧位方向,依次左侧卧位、俯卧位、右侧卧位、仰卧位,各卧位保持 15min。可使药液与肠壁充分接触,充分吸收。

10 中药保留灌肠相关并发症及处理措施

中药保留灌肠相关并发症,如肠道黏膜损伤、肠出血、肠穿孔、肠破裂、水中毒、电解质紊乱、虚脱、肠道感染、大便失禁、肛周皮肤擦伤,及其处理措施应符合附录 B 的规定。

附录 A
(资料性)
证候诊断

A.1 诊断原则

应用肠道灌洗方法治疗慢性肾衰时,需辨别本虚证与标实证,在临床上多为虚实夹杂证。

A.2 本虚证

表现为倦怠乏力,气短懒言。偏于肾气不足,可兼见腰膝酸软,夜尿频多,头晕耳鸣;偏于脾肾阳虚,可兼见畏寒肢冷,腰部冷痛,腹胀纳呆;偏于气阴两虚,可兼见口咽干燥,五心烦热,头晕肢乏。

A.3 标实证

慢性肾衰的病理产物主要为浊毒瘀阻。偏于湿浊证,可兼见恶心呕吐,口中粘腻,舌苔厚腻;偏于湿热证,可兼见口苦口黏,大便不爽,舌苔黄腻;偏于气滞证,可兼见暖气反酸,腹胀腹痛,肠鸣矢气;偏于血瘀证,可兼见面色晦暗,舌质紫暗,肌肤甲错。

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附录 B
(规范性)
中药保留灌肠相关并发症及处理措施

B. 1 肠道黏膜损伤

B. 1. 1 临床表现

肛门疼痛，排便时加剧，伴局部压痛；损伤严重时可见肛门外出血或粪便带血丝；甚至排便困难。

B. 1. 2 处理措施

B. 1. 2. 1 患者肛门疼痛时，暂停灌肠；

B. 1. 2. 2 疼痛轻者，嘱全身放松，帮助其分散注意力，减轻疼痛。疼痛剧烈者，立即予以对症处理，一旦发生肠出血按肠出血处理。

B. 2 肠出血

B. 2. 1 临床表现

肛门滴血或排便带有血丝、血凝块。

B. 2. 2 处理措施

B. 2. 2. 1 患者一旦出现脉搏快、面色苍白、大汗、剧烈腹痛、心慌气促，可能发生了肠道剧烈痉挛或出血，应立即停止灌肠并嘱患者平卧。

B. 2. 2. 2 严密灌肠患者的生命体征以及腹部情况，如发生肠穿孔、肠破裂，按肠穿孔、肠破裂处理

B. 2. 2. 3 建立静脉输液通道，根据病情遵医嘱应用相应的止血药物或局部治疗。

B. 3 肠穿孔、肠破裂

B. 3. 1 临床表现

灌肠过程中患者突然觉得腹胀、腹痛，查体腹部有压痛或反跳痛。腹部 B 超可发现腹腔积液。

B. 3. 2 处理措施

B. 3. 2. 1 立即停止灌肠并使患者平卧，同时进行抢救；

B. 3. 2. 2 立即建立静脉通道，积极完善术前准备，尽早手术；

B. 3. 2. 3 给予吸氧、心电监护，严密观察患者的生命体征。

B. 4 水中毒、电解质紊乱

B. 4. 1 临床表现

B. 4. 1. 1 水中毒者早期表现为烦躁不安，继而嗜睡、抽搐、昏迷，查体可见球结膜水肿；

B. 4. 1. 2 脱水患者诉口渴，查体皮肤干燥、心动过速、血压下降、小便减少、尿色加深；

B. 4. 1. 3 低钾血症者软弱无力、腹胀、肠鸣音减弱、腱反射迟钝或消失，可出现心律失常，心电图可见 ST-T 改变和出现 U 波。

B. 4. 2 处理措施

B. 4. 2. 1 一旦发生水中毒、电解质紊乱，立即停止灌肠并时患者平卧，同时报告医生，进行抢救；

B. 4. 2. 2 立即建立两路静脉通道，为患者输注林格液体及 4%氯化钠注射液，以补充电解质，运用甘露醇、呋塞米（速尿）以减轻脑水中毒；

B. 4. 2. 3 给予镇静剂，以减轻患者抽搐；

B. 4. 2. 4 给予胃肠减压，以减轻患者腹胀；

B. 4. 2. 5 给予吸氧、心电监护，严密观察患者生命体征的变化；

B. 4. 2. 6 密切观察尿量和尿比重。同时向患者解释和安慰患者家属，保持镇静。

B. 5 虚脱

B. 5. 1 临床表现

患者突感恶心、头晕、面色苍白。全身出冷汗甚至晕厥。

B. 5. 2 处理措施

立即停止灌肠并助患者平卧、保暖，一般休息片刻后可缓解恢复正常；如与饥饿有关，清醒后给予口服糖水等；如休息片刻后未缓解，给其吸氧，必要时静脉注射葡萄糖等，症状可逐渐缓解。

B. 6 肠道感染

B. 6. 1 临床表现

腹痛，大便次数增多，大便的量、颜色、形状有所改变。

B. 6. 2 处理措施

B. 6. 2. 1 根据大便化验结果和致病微生物情况，选择适合的抗菌药物；

B. 6. 2. 2 观察大便的量、颜色、性状等的变化并记录；

B. 6. 2. 3 根据医嘱应用抗菌药物。

B. 7 大便失禁

B. 7. 1 临床表现

大便不由自主地由肛门排出。

B. 7. 2 处理措施：

B. 7. 2. 1 已发生大便失禁者，床上铺橡胶（或塑料）单和中单或一次性尿布，每次便后用温水洗净肛门周围及臀部皮肤，保持皮肤干燥；

B. 7. 2. 2 必要时，肛门周围涂搽软膏以保护皮肤，避免破损感染。

B. 8 肛周皮肤擦伤

B. 8. 1 临床表现

肛周皮肤破溃，红肿。

B. 8. 2 处理措施

B. 8. 2. 1 皮肤破溃时可用 TDP 灯照射治疗，每天 2 次，每次 15-30 分钟；

B. 8. 2. 2 以外科无菌换药法处理伤口。

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Foreword

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. WFCMS shall not be held responsible for identifying any or all such patent rights.

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Introduction

Chronic kidney disease is an important global public health problem which seriously threatens people's health and their quality of life. Chronic kidney disease is called a hidden killer. The kidney has a strong compensatory function. In stages 1-2 of chronic kidney disease, patients will not develop obvious discomfort. However, after stage 3, due to the accumulation of toxins in the body, the compensatory function of the kidney will decline and discomforts including nausea, vomiting, fatigue, sleep disorders, and low back soreness and pain will appear, forcing the patients to seek medical treatment and be diagnosed with chronic kidney disease. Due to abnormal kidney metabolism, the main clinical manifestations of non-dialysis patients with stage 3-5 chronic kidney disease are a series of systemic poisoning symptoms caused by water, electrolyte, and acid-base imbalance and accumulation of toxins. And the case fatality rate is rising in recent years. When chronic kidney disease develops to end-stage, dialysis or kidney transplantation will be needed, resulting in more complications, a higher case fatality rate, and heavier medical burdens.

At present, modern medicine's treatments to delay the progress of chronic kidney disease are generally focused on treating protopathies, controlling risk factors such as blood pressure and proteinuria, symptomatic treatment, etc. With few treatment methods available, it is urgent to develop more effective means to treat chronic kidney disease.

Chinese medicine believes that the internal retention of dampness, turbidity, stasis, and toxin is the common feature of almost all patients with chronic kidney disease. The intestine "receives turbid-qi from the five zang-organs, and is called transportation and transformation fu-organ. This is due to the fact that turbid-qi cannot stay in the fu-organs for a long time and must be transported and discharged in time". That's why the intestine is called the official in charge of transportation. Therefore, "freeing the bowels and purging turbidity" is an important method throughout the treatment course of chronic kidney disease, and it is the treatment method of "cleansing the Jingfu" proposed in *Huangdi's Internal Classics*. Intestinal lavage with Chinese medicine is a TCM therapy based on freeing the bowels and purging turbidity. Now, as clinical evidence accumulates, the safety and efficacy of this method in treating non-dialysis patients with stage 3-5 chronic kidney disease have been initially validated. The method mainly has two treatment principles: first, the characteristics of human colonic mucosa are same as that of the semipermeable membrane, which can regulate the exchange of electrolytes and active substances in fluid in the intestinal lumen. Colon herbal dialysis helps the kidneys to eliminate toxins from the body. Second, patients with chronic kidney disease have intestinal dysbiosis. By regulating intestinal microecology and improving immune disorders, colon herbal dialysis can work effectively on non-dialysis patients with stage 3-5 chronic kidney disease.

At present, there is no technical standard of intestinal lavage for non-dialysis patients with stage 3-5 chronic kidney disease, but with the continuous innovation and improvement, the technique is becoming more and more mature. This

document is to better popularize the application of this technique, standardize its operation, and ensure its safety and efficacy.

VVFCM

International Standardized Manipulations of Chinese Medicine

Intestinal Lavage Technique for Chronic Kidney Disease Stages 3 – 5

1 Scope

This document specifies the standard operation of intestinal lavage technique for chronic kidney disease stages 3–5, including its terms and definitions, instruments, procedures, matters needing attention, etc.

This document applies to the operation of intestinal lavage for patients with stage 3-5 chronic kidney disease.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the dated edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 20348-2006 Basic theory nomenclature of Chinese medicine

ISO 14971-2007 Medical devices-Application of risk management to medical devices

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

Intestinal lavage

an operation that sets up an effective device for perfusion and excretion in the colon. With the semi-permeability of the colonic mucosa, the operation allows diffusion, permeation and exchange between the Chinese medicine dialysate and the capillaries in the intestinal mucosal tissue, thus removing metabolic wastes or toxins from the body and balancing water, electrolyte and acid-base.

3.2

Low intestinal lavage

Insert the catheter to a certain place in the intestine through the anus, and then infuse a proper amount of fluid and medication to cleanse the intestine, stimulate bowel movements or treat a disease with medication.

3.3

High intestinal lavage

Insert the catheter deep into the intestine through the anus and infuse a proper amount of fluid and medication. The effects of the treatment are as follows: cleansing the intestine thoroughly, removing toxins from the body, relieving constipation, stopping diarrhea, regulating intestinal dysbiosis, preventing

intestinal cancer, beautifying the face and the skin, helping with weight loss, regulating endocrine, and so on.

3.4

Disposable rectal catheter

a catheter that inserted into the anus to infuse intestinal lavage solution into or drain intestinal lavage solution from the colon.

3.5

Disposable enema bag

a sealed medical fluid bag connected to a disposable rectal catheter to store intestinal lavage solution.

3.6

Multi-use irrigator

a tool connected to a disposable rectal catheter and a multi-use reservoir bottle. It powers the perfusion and excretion with a balloon.

3.7

Chinese medicine colonic lavage solution

liquid Chinese medicine preparation for intestinal lavage, composed of various TCM ingredients.

4 Syndrome diagnosis

See Annex A for the syndrome diagnosis of intestinal lavage technique with Chinese medicine for chronic kidney disease stages 3–5.

5 Intestinal lavage procedure

5.1 Preparation of lavage medicine

5.1.1 Selection of lavage medicine

Select lavage medicine based on the different TCM syndromes of each patient.

5.1.2 Treatment

Syndrome differentiation is an important clinical aiding method in treating chronic kidney failure with intestinal lavage technique. It is recommended to modify the medication based on the syndromes(including deficiency in origin, excess in superficiality, and mixed deficiency-excess), and take into account of the deficiency in the function of visceral organs and the accumulation of excess pathological products. Physicians need to decide on the dosage according to the clinical situations and the patient's individual condition.

5.1.3 Dosage

5.1.3.1 Low intestinal lavage

Take 200ml of Chinese medicine decoction without residues and heat it to preferably 39-41 degrees Celsius. Add warm water to the lavage medicine selected based on the patient's syndromes until the total volume reaches 100-200ml and pour it into the enema bag. The specific dosage should be modified according to the patient's tolerance (1D).

5.1.3.2 High intestinal lavage

Mix the lavage medicine and warm water in the ratio of 1:4-5 until the total volume reaches 2000ml (1D).

5.1.4 The temperature of lavage medicine

The temperature of lavage medicine should be 37.0°C-37.5°C (1D).

5.2 Lavage time and frequency

5.2.1 Lavage time

5.2.1.1 Syndrome-differentiation of channels and collaterals

17:00 to 19:00 is the time when the kidney channel circulates. Performing intestinal lavage during this time can improve the medicinal effect.

5.2.1.2 Mealtimes

Intestinal lavage can also be performed between meals in the morning or afternoon. Performing treatment during this time helps reduce the patient's discomfort and improve medicine absorption.

5.2.2 Lavage frequency

5.2.2.1 Low intestinal lavage

It is advisable to perform intestinal lavage once a day. And the number of days should be decided according to the patient's conditions (1D).

5.2.2.2 High intestinal lavage

It is advisable to perform high intestinal lavage once a day or once every other day. And the number of days should be decided according to the patient's conditions (1D).

5.3 Lavage position

Bring the enema bag to the patient's bedside and hang it on the infusion stand with the liquid level 40-50cm above the anus. Ask the patient to lie on the left side with knees bent up toward the chest. Pull the pants down to the middle of the thigh. Put a small pillow under the hips to elevate them 10cm higher. Put a surgical drape under the hips. Remember to keep the patient warm. Place the kidney basin at the rim of the buttock. Lubricate the tip of the rectal catheter.

5.4 Lavage methods

5.4.1 Evaluation before lavage

5.4.1.1 Know about the patient's past medical history, current major symptoms and discomforts, allergies, etc.

5.4.1.1 Perform digital rectal exam before lavage to check possible contraindications.

5.4.1.3 Evaluate the patient's state of consciousness, physical condition, and the condition of perianal skin to decide whether to perform the treatment or not. The patient should sign the informed consent documents.

5.4.2 Preparation before lavage

5.4.2.1 Dressing: dress neatly, wear a name tag and a mask, and wash hands.

5.4.2.1 Items: prepare everything needed, such as Chinese medicine decoction, medical trays, disposable enema bags, water thermometers, kidney basins, paraffin oil, cotton balls, surgical drapes, tissues, record manual, etc.

5.4.2.3 Preparation: Bring the instruments to the patient's bedside, inform the purpose of treatment to the patient for cooperation. Ask the patient to urinate and defecate. Provide cover for the patient.

5.4.3 Selection of lavage instruments

5.4.3.1 Low intestinal lavage

Use multi-use irrigator or disposable enema bag as the instrument that infuses lavage medicine.

5.4.3.2 High intestinal lavage

Use multi-use irrigator or disposable enema bag as the instrument that infuses lavage medicine.

5.4.4 Insertion depth of the lavage instrument

5.4.4 Low intestinal lavage

Insert the disposable rectal catheter 15-20cm into the rectum through the anus (1D).

5.4.4.2 High intestinal lavage

Insert the disposable rectal catheter above 25cm into the rectum through the anus (1D).

5.4.5 Lavage procedures

5.4.5.1 Choose the proper lavage instrument and fill it with the lavage medicine.

5.4.5.2 Fully lubricate the part of the rectal catheter that goes into the rectum with lube.

5.4.5.3 Number of times and retention time of the lavage

- (a)** Low intestinal lavage: discharge the air in the enema bag, close the clamp, and lubricate the end of the rectal catheter. Separate the buttocks with the left hand, lubricate the skin around the anus, and insert the rectal catheter 22-25cm into the rectum with the right hand. Let it sit for a moment, hold it in place, and then slowly open the clamp. Adjust the drip rate to 20-25 ml/min, and inquire about the patient's feelings at the same time. After 8-10mins when all the medicine is infused, close the clamp, pull out the rectal catheter slowly, and gently press the anus with tissues. Put the disposable enema bag into the medical waste bin and ask the patient to stay lying down for one hour. Make the bed, clean up the instruments, and wash hands. Record the amount of intestinal lavage solution, the infusion process, infusion time, the patient's response and ask the patient to sign signature.
- (b)** High intestinal lavage: insert the rectal catheter gently into the patient's anus to the target depth and hold it in place. Make sure the temperature of the solution is appropriate, and then infuse the solution into the patient's rectum at various times according to the patient's maximum tolerance. The medicine should be retained in the body for 30 minutes or longer (the specific time duration should be modified according to the patient's tolerance). After the retention, let the patient evacuate before perform the next infusion. Remove the rectal catheter after all solution are infused.

6 Indications

6.1 Non-dialysis patients with stage 3-5 chronic kidney disease who haven't received hemodialysis or peritoneal dialysis for various reasons.

6.2 Non-dialysis patients who have poor indications for hemodialysis or peritoneal dialysis, or those who are the elderly.

7 Contraindications

7.1 Pregnant women

7.2 Patients who have severe hemorrhoids, anusitis, or active hemorrhage.

7.3 Patients who have had anal, colon, or rectal surgeries.

7.4 Patients who have intestinal perforation, bowel necrosis, peritonitis, acute enteritis, or gastrointestinal hemorrhage.

7.5 Patients who use artificial anus.

7.6 Patients who have uncontrolled severe cardiovascular diseases, severe hepatic ascites, or edema.

7.7 Other patients for whom the position and requirements of colon dialysis are inappropriate.

7.8 Patients who are allergic to colonic lavage solution or the ingredient in the Chinese medicine.

8 Matters needing attention

8.1 During the operation, observe the patient's tolerance and mental state, and asked about the patient's feelings, such as whether there is abdominal distension, abdominal pain and the urge to defecate. When the patient shows symptoms such as fine and rapid pulse, pale face, cold sweating, severe abdominal pain, palpitation, etc., stop the operation immediately and report to the physician.

8.2 After the infusion, gently press the anus with tissues for a while, wrap the rectal catheter with tissue, bend it and gently pull it out.

8.3 After the colonic dialysis treatment, the frequency of the patient's bowel movement may increase. The patient's perianal skin condition should be observed and cared in time.

8.4 Post-lavage observation: focus on the condition of abdominal pain and defecation, and use the Likert scale to score the patient's discomforts. If abdominal pain or urge to defecate occur, instruct the patient to relax, take deep breaths to extend the retention time. Observe the patient's heart rate, blood pressure and other vital signs, and report to the attending physician in time if any unexpected situation occurs.

Note: The likert scale: the uncomfortable symptoms include abnormal body temperature, abdominal distension, abdominal pain, borborygmus, palpitation and shortness of breath, swollen anus, and instant urge to defecate. Each symptom is scored as 1 for asymptomatic, 2 for mild, 3 for fair, 4 for severe, and 5 for very severe.)

9 Optimal treatment of retention enema with Chinese medicine

9.1 Temperature

The usual temperature of intestinal lavage solution is 39-41°C. The temperature can be increased to 40-44°C for patients with yang-deficiency and cold-body constitution. If the temperature is set 1-2°C higher than the patient's body temperature, abdominal pain, borborygmus, instant urge to defecate and other symptoms can be reduced to help the patient feel more comfortable.

9.2 Length

The conventional insertion depth is 15-25cm. Making the depth to 30cm can extend the retention time of the medicine to let it be absorbed more efficiently.

9.3 Retention time

Retain the medicine for 60-90min after lavage shows better efficacy. Using a TDP lamp to irradiate the abdomen after the lavage can extend the retention time and relieve abdominal pain.

9.4 Position

After the lavage, instruct the patient to change the clinostatism every 15 min in the order of left-sided, prone, right-sided, and supine. The patient should stay in each clinostatism for 15min. It allows the medicine to be fully absorbed by the intestinal wall.

10 Complications and treatments of retention enema with Chinese medicine

See Annex B for the complications of retention enema with Chinese medicine (including intestinal mucosal injury, enterorrhagia, intestinal perforation, enterorrhexis, water intoxication, electrolyte disorder, prostration syndrome, intestinal infection, fecal incontinence, and perianal skin abrasions) and their treatments.

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Annex A

(Informative Annex)

Syndrome diagnosis

A.1 Diagnostic principles

When treating chronic kidney failure with intestinal lavage, it is necessary to distinguish the syndrome of deficiency in origin from the syndrome of excess in superficiality. Mixed deficiency-excess syndrome is more common in clinical practice.

A.2 Deficiency in origin

The clinical manifestations are fatigue, shortness of breath, and disinclination to talk. Waist-knee soreness, frequent urination at night, dizziness, and tinnitus can also be seen in patients with kidney qi deficiency. Fear of cold and cold limbs, lumbar cold pain, abdominal distension, and anorexia can also be seen in patients with spleen and kidney yang deficiency. Dry mouth and throat, heat sensation in chest, palms and soles, dizziness, and lassitude of the limbs can also be seen in patients with qi yin deficiency.

A.3 Excess in superficiality

Turbidity and toxin obstruction is the main pathological products of chronic kidney failure. Nausea, emesis, sticky and greasy in mouth, and thick slimy tongue fur can be seen in patients with damp turbidity syndrome. Bitterness, sticky and greasy in mouth, non-smooth defecation, and yellow and slimy tongue fur can be seen in patients with damp heat syndrome. Belching, acid reflux, abdominal distension, abdominal pain, borborygmus, and flatus can be seen in patients with qi stagnation syndrome. Dull face, dark purple tongue, and squamous and dry skin can be seen in patients with blood stasis syndrome.

Annex B
(Normative Annex)

Complications and treatments of retention enema with Chinese medicine

B.1 intestinal mucosal injury

B.1.1 Clinical manifestations

Anal pain occurs and the pain gets worse with topical tenderness during defecations. Anal bleeding, small streaks of blood in the stool, or even dyschezia can be seen when the injury is severe.

B.1.2 Treatments

B.1.2.1 Pause the lavage when the patient feels anal pain.

B.1.2.2 Ask the patient with mild pain to relax the whole body. Help distracting the patient to relieve the pain. For patients with severe pain, treat them according to their symptoms immediately. Treat as enterorrhagia once enterorrhagia occurs.

B.2 Enterorrhagia

B.2.1 Clinical manifestations

Patients suffer from blood dripping from the anus, or finding small streaks of blood and blood clots in the stool.

B.2.2 Treatments

B.2.2.1 Once the patient has a rapid pulse, pale face, heavy sweating, severe abdominal pain, palpitation, and shortness of breath, severe intestinal spasm or bleeding may have occurred. Stop the lavage immediately and ask the patient to lie in the supine position.

B.2.2.2 Monitor the vital signs and abdominal condition of the patient closely. If intestinal perforation or enterorrhexis occurs, treat as intestinal perforation or enterorrhexis.

B.2.2.3 Set up intravenous infusion channels, and apply appropriate hemostatics or perform topical treatment according to the patient's condition or the doctor's advice.

B.3 Intestinal perforation and enterorrhexis

B.3.1 Clinical manifestations

The patient feels sudden abdominal distension and abdominal pain during the lavage, and feels tenderness or rebound tenderness in the abdomen when being examined. Ascites can be found by abdominal B-scan ultrasonography.

B.3.2 Treatments

B.3.2.1 Immediately stop the lavage, and let the patient lay in supine position for taking emergency measures.

B.3.2.2 Immediately set up intravenous infusion channels, make sufficient preoperative preparation, and perform operation as soon as possible.

B.3.2.3 Give oxygen and ECG monitoring to the patient and closely monitor the patient's vital signs.

B.4 Water intoxication and electrolyte disorder

B.4.1 Clinical manifestations

B.4.1.1 The early manifestations of water intoxication are dysphoria, followed by somnolence, convulsion, and coma. And bulbar conjunctival edema can be found on physical examination.

B.4.1.2 Patients with dehydration will feel thirsty. Dry skin, tachycardia, drop in blood pressure, decreased urine output, and dark urine color can be found on physical examination.

B.4.1.3 Patients with hypokalemia may have asthenia, abdominal distension, weak borborygmus, dull or absent tendon reflexes, and arrhythmia. ST-T changes and U waves may be seen on ECG.

B.4.2 Treatments

B.4.2.1 Once water intoxication and electrolyte disorder occur, immediately stop the lavage and lay the patient in supine position. Report to the physician and carry out rescue.

B.4.2.2 Immediately set up two intravenous infusion channels, and inject Ringer's solution and 4% sodium chloride injection to replenish electrolytes. Use mannitol and frusemide to reduce cerebral water intoxication.

B.4.2.3 Use sedatives to reduce convulsion.

B.4.2.4 Use GI decompression to reduce abdominal distension.

B.4.2.5 Give oxygen and ECG monitoring to the patient and closely monitor the patient's vital signs.

B.4.2.6 Closely observe urine volume and urine specific gravity. Explain the situation to the patient and comfort the patient's family to keep them calm.

B.5 Prostration syndrome

B.5.1 Clinical manifestations

Sudden nausea and dizziness, pale face, systemic cold sweating and even syncope.

B.5.2 Treatments

Immediately stop the lavage, lay the patient in supine position, and keep the patient warm. Generally the symptoms can be relieved after a few moments of rest. If the symptoms are caused by hunger, let the patient drink sweet water upon awakening. If the symptoms are not relieved after a few moments of rest, give oxygen and, if necessary, inject glucose or other medicine. The symptoms may be relieved gradually.

B.6 Intestinal infection

B.6.1 Clinical manifestations

Abdominal pain, increase in the frequency of bowel movement, and changes in the output, color, and shape of the stool.

B.6.2 Treatments

B.6.2.1 Choose appropriate antibacterial agents based on test results of the stool and pathogenic microorganisms.

B.6.2.2 Observe and record the changes in the output, color, and feature of the stool.

B.6.2.3 Use antibacterial agents based on the doctor's advice.

B.7 Fecal incontinence

B.7.1 Clinical manifestations

The stool being involuntarily discharged from the anus.

B.7.2 Treatments

B.7.2.1 For patients who already have fecal incontinence, lay rubber(or plastic) sheets and medical mat or disposable diapers on the bed. Wash the skin around the anus and buttocks with warm water after each bowel movement, and then keep the skin dry.

B.7.2.2 If necessary, apply ointment around the anus to protect the skin from injury and infection.

B.8 Perianal skin abrasions

B.8.1 Clinical manifestations

Ruptured, red, and swelling perianal skin.

B.8.2 Treatments

B.8.2.1 When the skin is ruptured, treat with TDP lamp twice every day and 15-30min each time.

B.8.2.2 Treat the wounds with aseptic dressing change technique.

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