·指南与共识·

中国冠心病康复循证实践指南(2024 版)第二部分

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临床问题及推荐意见(11~20)

临床问题 11:如何提高冠心病患者对药物治疗的依从性?

推荐意见:①向冠心病患者提供用药指导,推荐发病后开展强化用药教育或动机性访谈(牛津分级,证据质量 1a,推荐强度 A;GRADE 分级,1B)。②推荐在上述强化教育的基础上,配合使用手机、平板电脑等工具进行短信提醒、智能呼叫,进而提高患者对药物治疗的依从性(牛津分级,证据质量 1b,推荐强度 A;GRADE 分级,1B)。

推荐意见说明:①冠心病患者的长期服药率平均仅 50%[92],提高患者对药物治疗的依从性对于二级预防至关重要,因此需要心脏康复团队对患者需服用的药物的种类及时间进行确认[93];给予用药指导对提高患者的药物治疗依从性有一定的积极作用[94]。一项荟萃分析提到了多模式干预措施,包括患者教育与咨询、强化护理、药物卡片、简化用药方案等,结果发现上述措施能有效改善患者对药物治疗的依从性[95]。然而,不同研究间采用的干预措施有所不同,无法选出最优手段,建议通过提供强化教育或咨询(如动机性访谈或认知行为疗法)[94,96]、制订药物干预计划及随访计划[97]、依靠家庭成员提供日常支持等方式,帮助患者克服可能存在的用药障碍[92]。此外,还可以向患者提供多样化的药物宣教图片及视频,提供标明药名、用法、用药时间、不良反应的工具,以提升依从性[98]。②移动健康工具有助于改善患者对药物治疗的依从性。一项系统评价纳入了 10 项临床试验,使用短信提醒、蓝牙连接的电子药箱、在线消息平台、会话语音呼叫、自动电话智能呼叫、邮寄材料等方式进行干预,结果显示患者对药物治疗的依从性显著提高[99-100]。近期多项研究提示,使用手机短信或智能手机应用程序对提高患者的药物治疗依从性有一定的效果[100-102]。然而,这些研究间存在异质性,建议招募依从性较低的患者进行临床试验,以改善药物依从性。

临床问题 12:是否推荐冠心病患者进行营养评估?冠心病患者的饮食推荐?

推荐意见:①推荐采用问卷调查、健康饮食指数等对冠心病患者进行营养评估(牛津分级,证据等级 1a,推荐强度 A;GRADE 分级,1B)。②冠心病患者的饮食方式,推荐选择中国心脏健康饮食(Chinese heart-healthy diet, CHH)模式或地中海饮食模式(牛津分级,证据等级 1b,推荐强度 A;GRADE 分级,1B)。

推荐意见说明:①欧洲预防心脏病协会指出,饮食健康属于一级预防,营养是心脏康复计划的核心组成部分[103]。营养指导包括评估、确定饮食行为目标、营养教育,可通过膳食记录法、24 h 回顾法、双份法、生物样品指标等方法来收集膳食情况,准确分析营养成分,利用评估结果来设立目标,也可将有需要的患者转诊给注册营养师进行管理,以获得更专业的个性化指导。②CHH 是基于《中国膳食指南》提出的一种饮食模式,主要包括改变烹饪方式,减少食用油的使用,增加蛋白质、豆类和乳制品等的摄入,增加全谷物、膳食纤维及钾镁钙的摄入,减少钠的摄入。一项单盲 RCT 指出,采用 CHH 模式的患者收缩压变化差异为 10.0 mmHg[95% *CI*(-12.1~-7.9),*P*<0.001],显示出了较好的临床疗效[104]。此外,地中海饮食模式是各项指南广泛推荐的饮食方式,其以植物类膳食为主,包括全谷物类制品、水果、蔬菜、豆类、坚果类等,在动物蛋白摄入层面以鱼和海鲜为主,建议以橄榄油代替油脂的摄入。2021 年,美国心脏协会发布的科学声明推荐采用地中海饮食模式,以降低心血管疾病的发病率及死亡率[105]。对于冠心病患者,在二级预防方面,地中海饮食模式的获益优于低脂饮食[风险比(hazard ratio, *HR*) = 0.669, 95% *CI* (0.489~0.915), *P* = 0.013][106-108]。

临床问题 13:是否推荐冠心病患者进行心理评估?合并心理问题的患者应该如何干预?

推荐意见:①推荐使用患者健康问卷-2(patient health questionnaire-2,PHQ-2)、广泛性焦虑障碍量表-2(generalized anxiety disorde-2, GAD-2)对冠心病患者进行初步心理筛查,可以使用 PHQ-9、GAD-7 和 PHQ-

15 进一步评估心理状况(牛津分级,证据质量 1b,推荐强度 A;GRADE 分级,1B)。②以运动为主的心脏康复对改善冠心病患者的抑郁或焦虑症状有一定作用。多模式心理干预,如认知行为疗法、放松训练、正念等对合并抑郁或焦虑的患者有较好的治疗效果(牛津分级,证据质量 3a,推荐强度 B;GRADE 分级,1D)。③对于非药物治疗效果不佳或合并中度及以上焦虑或抑郁情绪的、给予药物治疗可改善症状的患者,建议至精神心理专科就诊,行进一步评估与治疗(牛津分级,证据质量 1a,推荐强度 A;GRADE 分级,1B)。

推荐意见说明:①急性冠状动脉综合征合并焦虑或抑郁的患者,1 年内非致死性心肌梗死和再住院风险分别增加约 2 倍和 5 倍,急诊就诊次数和 1 年内医疗花费明显增加[109]。建议采用 PHQ-2 和 GAD-2 对冠心病患者开展心理筛查,若得分≥3 分,则进一步使用 PHQ-9 和 GAD-7 评估,躯体症状较多时推荐采用 PHQ-15 或躯体化症状自评量表来评估心理状况[110-112]。②心脏康复能降低冠心病患者的抑郁风险[113-115],对预防和治疗抑郁等心理问题有积极作用[115-117]。一项 RCT 纳入心肌梗死 3 个月后的患者,共进行了 24 次间歇运动,结果发现运动训练能有效减少心肌梗死女性患者的抑郁和焦虑症状[118]。对症状严重的患者,可考虑给予心理干预[119]。有研究发现,与常规治疗手段相比,放松训练、认知重建技术、自我管理等心理干预手段能显著降低心脏病相关的死亡率[RR=0.79,95% CI(0.63~0.98)],并改善抑郁[SMD=-0.27,95% CI(-0.39~-0.15)]、焦虑[SMD=-0.24,95% CI(-0.38~-0.09)]和压力水平[SMD=-0.56,95% CI(-0.88~-0.24)][120-121],但全因死亡率、再次血运重建术或非致死性心肌梗死的发生率并未降低[122]。一项 RCT 将 8 周的认知行为疗法应用于患者,探讨其对患者心理问题的影响,发现患者的抑郁症状显著改善[123]。结合既往系统评价[120,124-126],应采用多模式心理干预,并根据患者的个体需求及时调整。对于 PHQ-9 或 GAD-7 评分 5~9 分的轻度抑郁焦虑患者,以及 PHQ-9 或 GAD-7 评分 10~15 分伴有躯体化症状的患者,可先给予运动、心理支持和药物对症治疗。结合患者的心肺适能及风险分层,制订个性化的运动方案[118];心理支持治疗,包括使用认知行为疗法纠正错误认知,配合使用音乐疗法、冥想、生物反馈等综合心理干预[127],以及互联网随访干预等[128];具体药物治疗方式可参考《在心血管科就诊患者心理处方中国专家共识(2020 版)》[112]以及《双心门诊建设规范中国专家共识》[129]。对于评估结果提示为重度抑郁或焦虑(PHQ-9 或 GAD-7 均≥15 分)的患者,建议及时请精神专科会诊或转诊至该科治疗[130-131]。

临床问题 14:如何对冠心病患者进行睡眠评估与管理?

推荐意见:①推荐通过问诊了解患者的睡眠状况,采用匹兹堡睡眠质量指数量表(Pittsburgh sleep quality index,PSQI)客观评价患者的睡眠质量(牛津分级,证据质量 3a,推荐强度 A;GRADE 分级,1C)。②对怀疑有睡眠呼吸暂停综合征的患者,首选睡眠呼吸暂停初筛量表(STOP-Bang sleep apnea questionnaire)进行筛查,若评分>3 分,再结合颈围和 Epworth 嗜睡量表(Epworth sleepiness scale, ESS)进行评估,ESS 评分>9 分及血氧饱和度监测趋势图有明显变化、氧减饱和指数超过 10 次/小时者,需进一步采用多导睡眠描记仪测试(牛津分级,证据质量 3b,推荐强度 C;GRADE 分级,2C)。③推荐冠心病患者在失眠急性期使用药物干预(牛津分级,证据质量 4,推荐强度 D;GRADE 分级,2D)。④推荐冠心病患者用非药物干预手段改善睡眠问题。干预方式包括环境控制、放松、运动、自我行为管理和认知心理干预(牛津分级,证据质量 1c,推荐强度 A;GRADE 分级,2C)。⑤睡眠卫生教育在冠心病患者的睡眠质量干预中也能起到积极作用(牛津分级,证据质量 1b,推荐强度 A;GRADE 分级,1B)。

推荐意见说明:①39.0%~69.0%的冠心病患者存在睡眠障碍,症状包括入睡困难、呼吸暂停或夜间多次醒来[132-134],对此应及时评估患者与睡眠相关的健康状况[135]。2020 年,《冠心病心脏康复基层指南》指出,可通过问诊了解患者的睡眠质量;采用 PSQI 客观评价患者的睡眠质量;对高度怀疑有睡眠呼吸暂停低通气综合征的患者采用多导睡眠监测仪或便携式睡眠呼吸暂停测定仪,以了解患者的夜间缺氧程度、睡眠呼吸暂停时间及次数;对于中、重度睡眠呼吸暂停低通气综合征的患者,应积极给予治疗[136]。②重度睡眠呼吸暂停低通气综合征与心肌梗死后的不良预后存在相关性[137-141]。对于疑似存在睡眠呼吸暂停低通气综合征的亚裔患者来说,STOP-Bang 问卷是一种简便、有效的风险评估工具[142-143]。目前,国内外的专家共识均建议采用两阶段筛查方法,首先使用 STOP-Bang 问卷评估患者存在阻塞性睡眠呼吸暂停的可能性,然后在必要时进行客观评估(便携式家庭监护仪或多导睡眠描记仪)[144-145]。此后,2023 年的一项研究比较了 4 种可用于筛查睡眠呼吸暂停低通气综合征工具的区别,发现采用颈围预测中、重度睡眠呼吸暂停低通气综合征的敏感性和特异性为 61%[146]。2023 年的一项研究建议对疑似睡眠呼吸暂停低通气综合征患者进行两步筛查:首先使用高度敏感的 STOP-Bang 问卷进行初步筛查,然后将其与 ESS 结合以提高特异性[147]。《成人阻塞性睡眠呼吸暂停基层诊疗指南》建议,对于 ESS 评

分>9 分且监测血氧饱和度趋势图可见典型变化、氧减指数超过 10 次/小时的患者，应行进一步客观评估[148]。③2013 年，《冠心病康复与二级预防中国专家共识》指出，冠心病康复应包括睡眠管理，处理失眠时首先需明确患者的失眠原因。在患者发生失眠的急性期，应尽早使用镇静安眠药物，且药物治疗需满足短程、足量、足疗程的要求，同时指导患者学会记录睡眠日记，纠正患者不正确的失眠认知和睡眠习惯[149]。④目前临床上对于冠心病合并睡眠障碍患者的治疗以镇静药物和促睡眠药物为主，但长期药物治疗存在一定的局限性，如患者依从性差、不良反应多[150]。非药物干预对改善冠心病患者的睡眠质量有积极作用，包括环境控制（使用耳塞和眼罩）、放松、自我行为管理（如深呼吸练习、体育锻炼和摄入牛奶）、认知/心理干预[151]。2023 年发布的《欧洲失眠指南》指出运动干预可作为失眠的辅助疗法[152]。有氧运动可有效促进患者垂体分泌内啡肽，运动后的疲劳感可促使患者大脑分泌抑制兴奋的物质，诱导患者入睡，增加睡眠时间，提升睡眠质量。⑤一项小样本研究报道，患者在接受了 3 个月睡眠卫生、营养和体育活动教育后，PSQI 评分显著降低[153]；另一项对心脏病患者实施睡眠干预的研究发现，干预后患者的睡眠质量有所改善[154]。

临床问题 15：对于吸烟的冠心病患者，是否建议戒烟？

推荐意见：①建议吸烟的冠心病患者戒烟，并为其提供戒烟计划（牛津分级，证据质量 2b，推荐强度 A；GRADE 分级，1C）。②戒烟干预主要分为药物干预和非药物性行为干预，药物干预包括安非他酮缓释片、伐尼克兰以及 5 种尼古丁替代疗法，非药物性行为干预包括使用认知行为治疗技术的行为技能训练、动机性访谈以及促进行为改变的激励措施等。推荐对冠心病患者实施非尼古丁药物干预及非药物性行为干预（牛津分级，证据质量 1c，推荐强度 A；GRADE 分级，2C）。③戒烟干预形式主要有住院期间干预、戒烟门诊及远程戒烟干预，其中住院期间是实施戒烟干预的最佳时间，远程戒烟干预包括电话干预、短信干预及社交软件戒烟干预，推荐对冠心病患者实施多种形式相结合的综合干预模式（牛津分级，证据质量 1c，推荐强度 A；GRADE 分级，1B）。④建议戒烟干预持续 4 周以上（牛津分级，证据质量 1b，推荐强度 A；GRADE 分级，1B）。

推荐意见说明：①吸烟是死亡/心肌梗死/脑卒中复合终点和主要心脑血管不良事件的独立预测因子[155]，应帮助吸烟的冠心病患者戒烟，并为其提供戒烟计划。2011 年，美国心脏协会发布的指南建议吸烟者在每次就诊时应接受戒烟咨询，并避免在工作、家庭和公共场所环境中接触到烟草烟雾[156]。全面禁烟立法与住院率或死亡率的显著降低相关[157]。②美国《烟草使用和依赖临床指南 2008 修订版》[158]推荐将含有尼古丁的口香糖、吸入器、含片、鼻喷雾剂、贴片等制品，以及安非他酮、伐尼克兰等非尼古丁制剂作为戒烟首选，以减少戒断症状，提高吸烟者长期戒烟率。一项网状荟萃分析发现，采用安非他酮[RR = 1.42，95% CI（1.01～2.01）]和伐尼克兰[RR = 2.64，95% CI（1.34～5.21）]的吸烟者的持续戒烟率较安慰剂组高。行为干预中的电话治疗[RR = 1.47，95% CI（1.15～1.88）]和个人咨询[RR = 1.64，95% CI（1.17～2.28）]均较常规护理方法的戒烟效率高，住院期间行为干预的有效性尚不能确定[RR = 1.05，95% CI（0.78～1.43）][159]。综上所述，以安非他酮缓释片、伐尼克兰为代表的非尼古丁类药物干预及非药物行为干预能提高冠心病患者的戒烟率，且不会增加心血管不良事件的发生率。③《美国心脏康复指南第六版》建议，患者住院治疗期间是实施戒烟干预的最佳时间[9]。在远程戒烟干预方面，一项 RCT 结果显示，电话干预组在干预 1～26 周内的戒烟率高于常规随访组[比值比（odds ratio，OR）= 1.53，95% CI（1.01～2.33）][160]；对冠心病患者提供个性化的戒烟短信提醒，可以帮助患者改变吸烟行为，降低吸烟者比例[161]；此外，社交软件戒烟干预也有一定的戒烟效果[162-163]。④2017 年，有指南建议，吸烟患者应接受持续 4 周以上的戒烟干预，措施包括电话联系、行为支持等[10]。2019 年，《韩国心脏康复临床实践指南》建议给予吸烟患者戒烟干预，并考虑持续 4 周以上[11]。

临床问题 16：如何对冠心病患者开展健康教育？内容有哪些？

推荐意见：①推荐对冠心病患者进行综合健康教育，包括胸痛管理、急救措施培训、日常活动建议（如驾驶车辆、乘坐飞机的建议）、危险因素管理（牛津分级，证据质量 1c，推荐强度 A；GRADE 分级，1C）。②基于手机等移动工具的自我管理可能有助于发挥健康教育作用，促进患者的生活方式和行为模式发生转变（牛津分级，证据质量 1b，推荐强度 A；GRADE 分级，1B）。

推荐意见说明：①健康教育能够提升冠心病患者康复的依从性[164]，加深患者对疾病的认识与理解[165]，改善患者的自我管理能力，督促患者坚持治疗并保持健康的生活方式[166]，提高自我效能感[167]。一项系统评价显示，接受健康教育可减少冠心病患者的致命性和/或非致命性心血管事件[RR = 0.36，95% CI（0.23～0.56）]，并可能改善与健康相关的生活质量[168]。通过健康教育，可以让患者获得冠心病防治

的相关知识,内容包括冠心病的危险因素控制、饮食及体重控制[13]。②近年来,基于电子技术的健康教育的作用日益凸显[169]。在传统的心脏康复项目中增加基于计步器的运动方案,可以显著增加患者持续进行中度至剧烈运动的时间[170],添加其它监测设备也可能获得较好的效果[171-172]。其中,电子技术的应用有助于控制血压等冠心病相关危险因素[173-176],基于短信的健康教育也能发挥一定的作用[177]。指导患者采用基于电子技术的自我管理,可能对改变患者行为模式和生活方式起到一定的积极作用[178]。

临床问题 17:如何帮助冠心病患者重返工作岗位,有哪些建议?

推荐意见:①建议冠心病患者进行包含有职业康复干预措施的心脏康复(牛津分级,证据质量 1c,推荐强度 A;GRADE 分级,2C)。②职业康复干预措施包括判断患者是否可以恢复正常工作,依据患者重返工作的要求、制订个性化运动处方,改变影响患者重返工作的其它不利因素(牛津分级,证据质量 2c,推荐强度 B;GRADE 分级,2D)。

推荐意见说明:①体能调节干预可能会提高 5 年以上冠心病患者重返工作的比例[179],但也有研究提示,参与心脏康复计划可能会导致患者重返工作的时间延迟[180]。因此,心脏康复方案对冠心病患者重返工作的影响有待进一步研究。此外,个性化多学科协作管理模式、心理干预可能对冠心病患者重返工作有所助益[181-182]。②职业康复干预,建议包含以下内容:第一,根据运动负荷试验结果获得患者的体能信息,结合多种活动的能量消耗水平和患者的工作特点,判断患者是否可以恢复正常工作[130],并针对重返工作的时间给出建议[183];第二,依据患者重返工作的要求,制订个性化运动处方,选择合适的运动强度,以帮助患者逐渐提高运动能力,适应工作需要。建议选择与实际工作所用肌肉群相关的运动,尽可能模拟工作中的活动模式,包括抗阻训练和有氧训练[10]。一项队列研究表明,模拟职业活动的训练方法有可能逐渐提高患者的运动能力,有助于患者重返工作[184];第三,改善影响患者重返工作的其它不利因素,包括环境压力、心理问题等。当患者存在工作环境压力时,应帮助患者了解注意事项,监测患者在相似工作环境中的生理反应[14],并告知患者躯体症状的自救方式[98]。此外,还应该关注患者的心理状况,对可能的心理问题进行干预。

临床问题 18:远程康复、居家康复、社区康复与医院康复对比,疗效如何?

推荐意见:①与医院康复相比,远程康复、居家康复、社区康复在运动功能、生活质量、药物治疗依从性、危险因素控制、抑郁和心脏相关住院事件方面的疗效基本相当(牛津分级,证据质量 1c,推荐强度 A;GRADE 分级,2C)。②推荐将实时监测、远程康复平台、微信等技术用于冠心病患者康复,以提高运动能力、降低住院率等(牛津分级,证据质量 1b,推荐强度 A;GRADE 分级,1B)。

推荐意见说明:①社区、门诊或住院等模式是实现心脏康复的重要渠道,其能够使患者尽可能地恢复心肺功能,更好地参与社会活动,提升生活质量[185];远程心脏康复能显著改善冠心病患者的 6 min 步行试验距离,且在功能、身体活动行为、生活质量、药物治疗依从性、吸烟行为、生理危险因素、抑郁和心脏相关住院事件等结局指标方面,与医院康复有着同等影响[186]。这些结论在多项系统综述和临床研究中也得到了证实[187-196]。既往国外指南建议开展远程心脏康复[10-11,13],以改善患者的心肺适能、减少住院率以及心血管不良事件的发生率[197-202]。通过定制的远程康复平台,可为患者制订个性化的运动处方、开展实时运动监测与指导、进行基于理论的行为干预,能够在一定程度上改善患者的腰围和臀围[203]。使用心率监测设备进行远程居家康复,对低至中度心血管风险患者的峰值摄氧量、运动表现和总体健康状况有较好的长期影响[204]。此外,基于微信的远程心脏康复能够提高患者对药物治疗的依从性,并改善收缩压和低密度脂蛋白胆固醇水平[205]。

临床问题 19:运动风险分层高危患者心脏康复的开展时机和方法?高龄、肥胖等特殊人群如何开展心脏康复?

推荐意见:①推荐运动风险分层高危患者在三级医院进行心脏康复评估,并在严密的医学监护下进行运动训练(牛津分级,证据质量 5,推荐强度 D;GRADE 分级,1D)。②高龄患者的心脏康复不受年龄和基线功能水平限制,但需要多学科专家协作评估后方可开展。高龄患者家属的支持在一定程度上可以促进患者更好地完成心脏康复。推荐为高龄患者制订个性化运动方案,包括有氧运动、抗阻训练和平衡性训练(牛津分级,证据质量 4,推荐强度 C;GRADE 分级,1D)。③对于体重指数>28 kg/m^2 的个体,或>24 kg/m^2 并伴有腹部肥胖(男性腰围≥90.0 cm、女性腰围≥85.0 cm)的冠心病患者,推荐给予个性化营养指导,其运动处方的制订以保证安全为前提,选取合理的中等强度运动或中-高强度剧烈运动,以增加患者热量消耗(牛津分级,证据质量 4,推荐强度 C;GRADE 分级,2D)。

推荐意见说明:①高危患者心脏康复的评估与后续运动训练需转诊至三级医院、在严密医学监护下进行,期间必须密切关注患者的血压、血氧、心电、呼吸、

症状和疲劳程度,并做好急救预案[145]。为高危患者设计低强度步行训练,运动中心率以不超过 20 次/分为宜,每周 3 次,每次 10~30 min[136]。②建议高龄冠心病患者在心脏康复前接受全面评估[206]。目前的文献表明,身体功能有限的高龄患者仍然可以从心脏康复中获益[207-213],其心脏康复的顺利开展离不开配偶、成年子女的支持[214],运动方案的设计应重视抗阻训练[215]和平衡训练[216]的作用。③冠心病患者的体重减轻与较差的预后相关,但若在改变生活方式(增加身体活动和减少热量摄入)的前提下有意减重,则会对患者的康复产生积极的影响[217];向肥胖冠心病患者提供个性化的营养咨询很重要,包括采用标准化问卷对肥胖冠心病患者进行饮食评估[218],指导患者学会计算食物热量[219];抗阻训练虽然不能减重,但是可以促进脂肪减少,并增加肌肉含量[220-221]。

临床问题 20:如何提高冠心病患者康复的参与率?

推荐意见:推荐对冠心病患者实施多学科团队共同指导的综合康复以及个性化的康复计划,以提高心脏康复的参与率(牛津分级,证据质量 1a,推荐强度 A;GRADE 分级,1B)。

推荐意见说明:目前,心脏康复的参与率和依从性均较低[222-223]。时间、距离、费用、共病因素、对心脏康复的认识与看法均会影响冠心病患者心脏康复的参与度[224]。心脏康复是一项长期、团队合作的综合计划,应与多学科交叉领域相融合[10-11,13],由多学科团队以最合适的方式为患者提供咨询和优质医疗服务,多学科团队应由医生、护士、康复治疗师、药剂师、营养师、临床心理学家等组成[53],以提供更高质量的心脏康复措施。

总结与展望

本指南基于现有证据,对冠心病心脏康复的关键问题进行了全面的证据检索,经过反复修订,形成了基于 20 个问题的推荐意见,以期为开展心脏康复提供规范化的方案。但由于证据存在一定的局限性,且部分指南问题所对应的证据质量偏低,未来仍需要更多高质量的 RCT 来提供证据,以更好地指导开展临床工作。

本指南仅代表编写及审议专家们的观点,不具备法律效力

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