

心房颤动可矫正危险因素 研究进展

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摘要

心房颤动是常见的心律失常, 通过改变主要的可改变的因素, 如戒烟、戒酒、改变饮食习惯和运动, 可以使患者在心房颤动中获益。本文将就心房颤动可矫正危险因素研究进展进行综述。

关键词

心房颤动, 危险因素, 综述

Research Progress on Modifiable Risk Factors of Atrial Fibrillation

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Abstract

Atrial fibrillation is a common arrhythmia, by changing the main modifiable factors, such as quitting smoking, drinking, changing dietary habits, and exercising, patients can benefit from atrial fibrillation. The present article makes a review about research progress on modifiable risk factors of atrial fibrillation.

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Keywords

Atrial Fibrillation, Risk Factors, Review

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1. 引言

现心房颤动(Atrial fibrillation, 简称房颤, AF)已成为临床上常见的心律失常之一, 心房颤动不仅会降低患者的生存质量, 同时也会导致死亡率和发病率的显著增加。预计到 2050 年, 美国 AF 患病人数将达到 600~1200 万, 欧洲国家 AF 患病人数将达到 1790 万[1]。目前心房颤动在我国成年人中的患病率已至 1.6%, 80 岁及以上居民其患病率已经高至 5.9% [2]。现心房颤动的指南越来越重视预防房颤, 且越来越多证据表明, 通过改变肥胖、吸烟、饮酒、高血压等可矫正危险因素, 可预防房颤的发生与发展[3] [4]。故本文就可矫正的危险因素与房颤发生与发展的关系进行综述, 为临床中识别房颤高危人群及更好管理房颤患者提供参考。

2. 肥胖

肥胖是房颤的一个潜在危险因素, 一项对 51 项研究进行的荟萃分析的数据显示[5], 体重指数(BMI)的增加与房颤的发生相关, 体重指数每上升 5 个点, 可导致房颤发生风险增加 20%~30%, 术后房颤风险增加 10%, 消融后房颤风险增加 13%。现肥胖至发生房颤的机制尚未完全清楚, 其可能与心房重构、心外膜脂肪组织浸润、肾素 - 血管紧张素 - 醛固酮系统(RAAS)激活、自主神经功能障碍、炎症反应等相关[6]。据 Melissa E Middeldorp 等研究表明[7], 超重患者的长期持续体重减轻可延缓 AF 进展的逆转和窦性心律维持增加。另进行减肥手术, 也可以降低房颤的风险, 在一项针对 4021 名严重肥胖患者的研究中, 通过减肥手术减轻体重可将新发 AF 的风险降低, 并且还减少了消融后的复发[4] [8]。

3. 酒精

过量饮酒亦是导致房颤发生的高危因素, 证据表明酒精摄入在房颤进程中起到促进作用[9]。研究表明, 即使每天饮酒 1 杯, 也可能会显著增加 AF 的风险[10] [11]。短期过量饮酒可能是通过引起心房电重构来为房颤发生提供有利条件。有动物研究实验发现, 短期持续酒精注入可降低心房 L 型钙离子通道和钠离子电流密度, 从而至易诱发房颤。长期饮酒则通过直接对左心房基质重构及其他房颤危险因素(包括高血压、肥胖和心力衰竭等)的相互作用来促进发生房颤[12]。虽证明饮酒与房颤相关, 两者间仍有问题待研究, 如饮酒量与房颤的关系。对于经常饮酒的患者来说, 戒酒已被证明可以显著改善房颤负担, 在一项纳入 140 名长期饮酒的房颤患者研究显示, 戒酒可减少房颤复发[13]。国内夏桂玲等学者亦通过研究证实, 戒酒可以明显可减少消融术房颤复发概率[14]。

4. 吸烟

在一项荟萃分析中, 与从不吸烟相比, 目前吸烟和曾经吸烟与发生房颤的风险增加 33%和 21%, 研究中表明, 吸烟时间越长, 每日吸烟支数越多, 其发生房颤的风险就也高[15]。吸二手烟同样可以增加房颤发生的风险, 在 Groh 等人分析表明[16], 发现父母吸烟次数的每一次增加可以导致后代 AF 发病率增

加 18%，另一项来自以色列的病例研究表明，从未吸烟的女性在接触二手烟后亦可导致房颤发生率增高。吸烟可能通过直接使心房发生电重构及结构重构及诱发其他疾病(如冠心病、心力衰竭、慢性阻塞性肺疾病)来促使房颤的发生与发展[17]。同时吸烟也被认为是预测第一次消融术后房颤复发风险的关键危险因素，最近的一项研究表明，患有持续性房颤的吸烟者在导管消融后复发的发生率更高[18]。在一项纳入 17,898 名房颤患者研究中显示，戒烟患者与持续吸烟患者相比，其中风的风险可降低。故戒烟在房颤患者中至关重要。

5. 运动

众所周知，定期锻炼可降低与心血管疾病相关的许多危险因素的风险。但在房颤中这种关系是微妙的，不同运动强度、运动方式及运动频率似乎对房颤的发生与发展会产生不同的影响，现阶段大部分的证据表明低-中等强度运动可以使房颤的风险减低，而高强度运动对房颤的影响仍存在争议，增加在英国一项纳入了 402,406 人的研究中表明[19]，每周高于 500 min 分钟的体育运动可降低房颤发生的风险，而在另一项纳入在一个超过 50 万例成人的研究中发现[20]，发现房颤风险与运动强度之间存在 u 型负荷-风险关系，每周运动少于 500 分钟或大于 1000 分钟的人发生房颤的风险更高。对于高强度运动与房颤之间关系现仍存争议。Franklin 等研究表示[21]，长期高强度的运动可增加心房颤动的发生，但在 Molina 等研究中表示[22]，较低强度运动而言，高强度的运动似乎对房颤的发生及发展并没有明显影响，目前运动影响房颤机制尚未完全明确，其在低-中强度运动中可能通过抑制肾素-血管紧张素-醛固酮系统、调整机体炎症状态、调节自主神经、抑制心房重构及改善其他危险因素(如肥胖、高血压)等来降低房颤发生，而当超过推荐的训练限度，运动的保护作用可能会减弱，从而增加房颤的风险。

6. 高血压

高血压不仅是房颤最常见的危险因素，也是最重要的可改变的危险因素，血压升高可通过自主神经系统的失调、激活肾素-血管紧张素-醛固酮系统(RAAS)、心房扩张、心室肥厚、纤维化等机制来导致房颤的发生与发展。高血压不仅仅可增加房颤发生的概率，同时其还可以促进房颤向永久性房颤进展。房颤患者中约有 79.4% 的人群合并高血压[23]。有研究表明[24]，每当收缩压上升 20 mm 汞柱，增加约 21% 房颤发生风险因此控制血压预防房颤及控制其发展中至关重要。目前对于房颤合并高血压患者，血压控制目标是接受高血压治疗的 AF 患者，最佳的血压控制目标是将收缩压 120~129 mmHg，舒张压控制在 80 mmHg 以下[25]。近期研究显示[26]，当房颤患者基线收缩压 ≤ 110 mmHg 或舒张压 < 70 mmHg 时全因死亡风险显著升高，故过低的血压我们仍需重视。对于血压控制，血管紧张素受体阻滞剂(angiotensin receptor blocker, ARB)和血管紧张素转换酶抑制剂(angiotensin-converting enzyme inhibitor, ACEI)，是一个很好的选择，一项包括 87,048 名患者在内的 23 个随机对照试验进行了结果表明[27]，无论是血管紧张素转换酶抑制剂或是血管紧张素受体阻断剂都将房颤的发生几率降低 33%，同时可以降低心房颤动患者电复律及药物复律后心房颤动的复发率。近期一篇来自于欧洲心脏杂志 META 分析表示[28]，使用醛固酮受体拮抗剂(MRA)亦有预防房颤发生与预防复发的作用。

7. 糖尿病

糖尿病一直被认为是心房颤动的危险因素，1994 年 Benjamin 等人[29]通过长期前瞻性队列研究首次表明，患有糖尿病可以使无论男女性的房颤发生率增加。在一项荟萃分析中表明[30]，与无糖尿病患者相比较，糖尿病患者新发房颤的风险高出了 34%。糖尿病还与房颤患者的症状负担增加、生活质量降低、住院率和死亡率增加有关。在目前的研究中，已经证明，不仅是高血糖状态，而且血糖波动过大对糖尿

病患者房颤的发展有重要影响。氧化应激、RAAS 系统激活, 自主神经和结构重构在糖尿病相关性房颤的病理生理学中起着关键作用。在台湾省一项队列研究中表明[31]。2型糖尿病患者使用二肽基肽酶-4 抑制剂可以降低新发房颤的风险, 而钠-葡萄糖协同转运蛋白 2 (sodium-dependent glucose transporters 2, SGLT-2)抑制剂和胰高糖素样肽-1 (glucagon-like peptide 1, GLP-1)激动剂对房颤的影响仍有待研究。

8. 空气污染

空气污染物也是心血管疾病的危险因素之一, 近年来, 其与房颤的相关性吸引了越来越多人注意。大量研究表明, 暴露于空气污染物中通过氧化应激、炎症和自主神经紊乱等机制, 来诱导房颤发生。据 Liu 等人研究表明[32], 短期暴露于颗粒物(PM2.5、PM10)增加了房颤的发生风险, 在另一项荟萃分析中同样提示[33], 短期暴露与长期暴露均可使房颤发生的风险上升, 此外, 若患者如还合并有其他危险因素(如高血压、肥胖和糖尿病)那其在暴露于空气污染情况下则更容易触发房颤。

9. 甲状腺疾病

甲状腺功能增强或是减退都与房颤相关。当出现甲亢时, 可显著增加新发房颤的风险。据 Christian 等人的研究表明[34], 若患者若合并有甲亢、亚临床甲亢会导致了房颤风险增加了 42%、31%。我们认为触发房颤的主要因素是游离甲状腺素(FT4)水平, 通过其导致心房发生电生理重构、交感神经重构以及结构重构, 从而更容易诱导房颤的发生。Chaker 等研究表明[35], 甲亢患者体内血清游离甲状腺素(FT4)浓度升高, 房颤的发生风险也会升高。我国有研究表明[36], 甲状腺机能亢进病史是心房颤动患者院内主要心血管不良事件(MACE)的独立危险因素。通常, 当甲状腺正常状态恢复时, 房颤会自发地恢复为窦性心律, 与无甲状腺功能亢进相关的房颤相比, 电转复后房颤伴甲状腺功能亢进的房颤复发率较低[37], 而关于甲状腺功能减退与房颤的关系尚待研究, 目前多数研究证明, 甲状腺功能减退可降低房颤的风险, 但可能会增加房颤患者出血的风险[38]。

10. 阻塞性睡眠呼吸暂停

阻塞性睡眠呼吸暂停(obstructive sleep apnea, OSA)在房颤的发生与发展中扮演者重要角色, 据 Nestor 等学者研究表明[39], 患有阻塞性睡眠呼吸暂停的患者心房颤动的发生率明显高于未患有阻塞性睡眠呼吸暂停的患者, 且心房颤动发生的风险与 OSA 的严重程度呈正相关。同时 OSA 还可以影响心房颤动患者药物治疗及射频消融的疗效[40]。据 Szymansk 等研究发现[41], 患有 OSA 的心房颤动患者在经射频消融复律后更易复发房颤。OSA 引起心房颤动的机制尚未完全明确, 其可能的机制有自主神经功能障碍、炎症反应、氧化应激、胸内压改变及心电重构与结构重构等。持续气道正压通气是治疗 OSA 患者的首选方法, 在一项纳入 122 名中国患者的研究中表明[42], 使用持续气道正压通气可以减少消融术后复发心房颤动的概率。在另一项纳入 1087 名 OSA 患者的荟萃分析报告显示[43], OSA 患者使用持续气道正压通气可使 AF 复发风险降低 42%。

综上所述, 房颤具有高度相互关联且可改变的如糖尿病、高血压、甲亢, 饮酒等危险因素, 通过改变多方面的危险因素可减轻房颤负担。故在未来, 我们应更加重视有关房颤预防, 根据患者情况来制定个性化生活方式来减少危险因素, 从而达到预防房颤发生与发展, 提高人群生活质量的目的。

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