

心脏电复律治疗心包钙化合并心房颤动 1 例*

门琳桐 林立 吕家高*

华中科技大学同济医学院附属同济医院心血管内科,湖北武汉 430030

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缩窄性心包炎的特征为心包增厚纤维化、钙化,可导致心脏舒张功能异常最终引发心力衰竭,心包钙化的位置及程度不同所导致的临床表现也不尽相同^[1-4],心包钙化位置可见于房室沟、心包底部及膈部等^[5,6],本文报道 1 例。

病例资料

患者男,37岁,因“发现房颤半月”于2019年10月17日收入华中科技大学同济医学院附属同济医院。患者2019年10月2日因车祸外伤就诊于武汉市蔡甸区中医医院行心电图检查,结果示心房颤动,患者无胸闷、心悸、乏力等不适,当时未在意。2019年10月9日在华中科技大学同济医学院附属同济医院行心电图检查示心房颤动、ST段改变;心脏彩超示二、三尖瓣瓣环处心包增厚、钙化;双房增大;心律失常。患者为进一步治疗于2019年10月17日入院。患者既往体健,否认结核病史,否认风湿免疫疾病史,否认房颤家族史,无烟酒嗜好。入院时体格检查:T 36.5℃,P 82次/min,R 19次/min,BP 103/65 mmHg,神志清楚,皮肤及巩膜无黄染,颈静脉无充盈,双肺呼吸音清,未闻及干湿性啰音,心界不大,心律不齐,第一心音强弱不等,各瓣膜未闻及病理性杂音。腹软,无压痛及反跳痛,肝脾肋下未触及,肾区无叩痛,双下肢无水肿,病理征阴性。辅助检查:血常规、血生化、氨基末端脑钠肽前体(NT-proBNP)、甲状腺功能、凝血功能、血沉、输血前八项均在正常范围内;颈动脉彩超、腹部彩超未见异常。心脏彩超显示二尖瓣、三尖瓣瓣环处心包增厚可见钙化,三尖瓣轻度狭窄并轻-中度关闭不全,右心增大(右心房5.0 cm×5.8 cm,右心室4.0 cm),左心室射血分数(left ventricular ejection fractions, LVEF)减低至41%,左心房增大(4.0 cm),心律失常,室间隔二尖

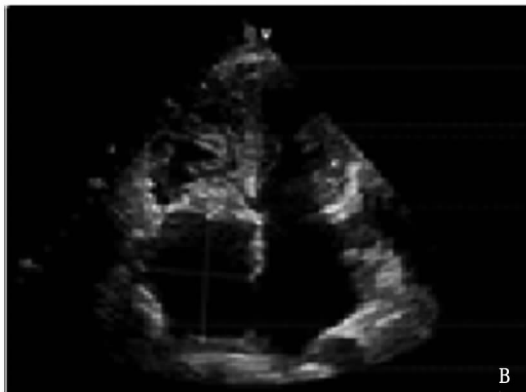
瓣环处E'速度为9 cm/s,见图1。食管超声未见左心耳血栓、未见卵圆孔未闭。24 h动态心电图显示全程为心房颤动,最小心室率37次/min,最大心室率138次/min,平均心室率70次/min,部分伴室内差异性传导;全程>2 s的停搏有180个,最长RR间期2.76 s,部分连续长RR间期>1.5 s,考虑合并二度房室传导阻滞可能。肺部及心脏CT平扫显示心脏瓣膜处环形密度增高影,结合超声,考虑心包增厚钙化可能,见图2。心脏磁共振显示中间段下间壁及左室下壁心肌增厚,伴中间段左心室下壁少许纤维化形成,考虑不典型肥厚型心肌病可能,双心房增大,见图3。根据欧洲心脏病协会(European Society of Cardiology, ESC)发布的关于缩窄性心包炎诊断与治疗指南,低心排量所致严重慢性体循环淤血以及影像学存在心包增厚、钙化、心室充盈等改变可作为其诊断依据。结合患者的临床表现及相关辅助检查,考虑为缩窄性结核性心包炎、不典型肥厚型心肌病可能。患者入院后给予抗凝、护胃、控制心率等治疗,并于2019年10月21日行电复律治疗术,术中为防止心脏异位起搏点长期发放冲动抑制窦房结功能而出现术中及术后窦性停搏风险,在2%利多卡因局麻后植入临时起搏器,见图4,随后静脉推注安定注射液5 mg,200J同步直流电复律后转复为窦性心律,心电监护提示频发房性早搏,心率75次/min,撤右心室电极送到高位右房,行心房S1S1刺激550 ms房室文氏传导,测窦房结恢复时间1 200 ms,术后予以盐酸胺碘酮以10 mL/h静脉泵入。患者院外随访期间未再出现房颤,2020年1月26日复诊,心电图提示窦性心律,无特殊不适,嘱其终身服用华法林抗凝治疗,维持INR值在2.0~2.5之间,并定期随诊,调整胺碘酮、琥珀酸美托洛尔缓释片的剂量。

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*通信作者:吕家高,E-mail:lujiagao@tjh.tjmu.edu.cn,湖北省武汉市硚口区解放大道1095号



心尖切面示三尖瓣占位



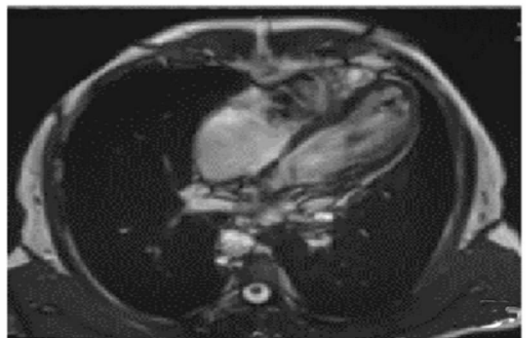
心尖四腔切面示三尖瓣占位

图1 心脏彩超



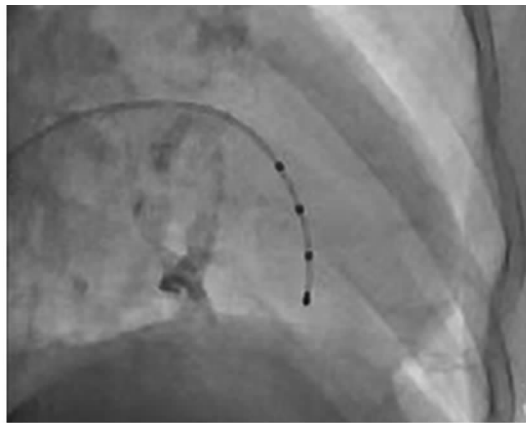
显示不同断层瓣膜环形高密度增高影, 心包钙化

图2 肺部CT



显示不同断层心肌纤维化及肥厚

图3 心脏MRI



透视仪右前斜位可见心包钙化灶及瓣膜占位

图4 临时起搏器置入

讨论

该患者为年轻男性,心包钙化位置罕见,处于心脏瓣环处,影响左室充盈。心房颤动因心房收缩不规则,导致心室充盈量进一步减少,同时,心室节律不规则可导致左室功能障碍,冠脉供血不足,在缺乏外界的干预治疗下病程进展,导致心室重构,最终引发心衰。心室重构可引起心房肌纤维化以及心房压力使心房进一步扩大,形成房颤与心衰之间的恶性循环^[7]。考虑到患者心房颤动只是表象,阻止心功能进一步恶化是首要治疗目标,射频消融手术费用昂贵且存在窦性停搏、高度房室传导阻滞等风险,暂不选择,待心功能好转,建议进一步就诊外科解除心包钙化。

缩窄性心包炎是由于心包慢性炎症使心包增厚、粘连甚至钙化,导致心脏舒张功能受限,进而引起一系列循环障碍的疾病^[8-10],其最常见病因为特发性或病毒感染,其次是心脏手术、放疗、结缔组织疾病^[11, 12],在发展中国家结核病是最常见病因^[13]。患者住院期间因未能完善风湿免疫系统相关检查以及结核病相关检查,心包炎病因尚不能明确。缩窄性心包炎虽常伴心包增厚及钙化,但心包钙化的发生率不到 25%^[14, 15]。研究表明,心包钙化患者易并发房颤,且心包钙化会导致房颤病程延长以及发生率增加,还会导致临近心肌纤维化^[16, 17]。在疾病诊断方面,心脏彩超、胸部 X 线、CT、心脏核磁等检查可辅助评估心包及心肌受累情况^[17, 18],亦可对限制性心肌病、重度三尖瓣返流等疾病进行鉴别诊断^[19]。当室间隔运动异常合并二尖瓣环间隔 E' 速度 ≥ 9 cm/s、呼气相肝静脉血流逆速率 ≥ 0.79 时,超声诊断特异性增加至 97%,但敏感度下降至 64%。

有创性诊断方法如心包穿刺活检及心包镜有助于明确心包疾病的性质,需结合患者自身情况选择合适的检查方法。

心包切除术是公认的治疗方法^[19-21],对于病情轻微或者合并心肾功能不全的患者,应慎重考虑手术治疗。研究表明 LVEF 降低和右心室扩大是缩窄性心包炎患者早期死亡的独立预测指标。若晚期合并冠心病、慢性阻塞性肺疾病、肝硬化、心力衰竭、肾功能不全等并发症可增加手术死亡风险^[22]。因此,选择最佳手术时间对于疾病的预后至关重要^[22]。心包切除术分为全心包切除和部分心包切除,研究发现,心包部分切除术较全心包切除术死亡风险增高 4.5 倍^[23, 24],因此选择合适的手术方式也需因人而异。

该患者三尖瓣团块性质不明,应进一步完善检查以明确团块性质是否为血栓、钙化或肿瘤等^[25, 26],避免出现血管栓塞^[27]以及右心功能恶化等不良后果^[28]。该患者考虑为瓣膜钙化可能性较大,但目前无创辅助检查无法判断其性质,手术切除病检可明确团块病因但风险大,心脏造影安全性较高但不是确诊的金标准。

终末期心包疾病患者的临床表现包括恶病质、房颤、低心输出量[心脏指数 $< 1.2 \text{ L}/(\text{m}^2 \cdot \text{min})$]、蛋白丢失性肠病所致的低蛋白血症以及心源性肝硬化引起的肝功能受损^[18]。该患者处于心包疾病晚期阶段,进行电复律治疗相对安全、经济,目的在于控制心律失常进而改善心房功能,获得近期治疗效果。需待心功能改善且趋于稳定时进行,可降低围手术期及手术中风险。选择不同治疗方案及合适的手术时机对于降低患者围手术期的死亡率,提高生活质量至关重要。临床医师应充分针对每位患者自身需求、合并症进行仔细评估,权衡利弊后制定个体化诊疗方案。

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巴瘤预处理方案中使用洛莫司汀替换卡莫司汀^[6],化疗毒性、植入率、移植相关死亡率均相仿,主要不良反应为口腔黏膜炎(26/48),经治疗后症状均可控。有临床研究发现,10例使用顺铂联合地塞米松替换卡莫司汀方案预处理的淋巴瘤患者,70%患者获得CR,8例发生I~II级口腔黏膜炎,2例发生III~IV级口腔黏膜炎,在造血干细胞植入后症状均得到控制^[18]。

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