

纳入研究(50%患者于2004年就诊,50%患者于夏季数月中就诊)。29例(91%)患者为女性,中位年龄为67.5岁。已知有14例(44%)患者患有慢性阻塞性肺病或哮喘。13例(41%)患者报告在症状发作前曾经历急性应激事件。25例(78%)患者表现出急性冠状动脉综合征的临床征象,其中有20例(63%)患者呈肌钙蛋白T阳性。左室射血分数的中位值为42.5%。研究获得30例(94%)患者的随访资料,中位随访时间为6个月。2例患者在随访期内死亡(1例为恶性肿瘤,1例死因不明)。对26例(81%)患者进行了超声心动图检查,其射血分数的中位值为70%。结论:Tako-tsubo样心肌病可能应作为急性冠状动脉综合征的鉴别诊断,尤其是对于老龄女性。慢性肺疾病可能与更高风险相关。2004年病例数量增多的原因尚不清楚,但急性冠状动脉综合征的早期血管造影倾向可能与此现象相关。同样也还无法理解造成夏季数月病例累积的原因。

#### 0146. Role of erythropoietin in anemia after heart transplantation

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Background: Anemia after heart transplantation is common; however, there are scant data on etiology and treatment. This study evaluates type of anemia and the effects of erythropoietin therapy. Methods: In 37 anemic heart transplant recipients(31 male/59.1 ± 10.3 years/hemoglobin < 12.0g/dl), complete anemia work-up was performed including erythropoietin determination. For three months, 12 anemic patients with renal failure(9 male/64.1 ± 13.6 years) were treated with 1-3 × 4000 IU of epoietin beta/week; treatment endpoints were hemoglobin levels and quality of life as determined by questionnaire. Results: In 31 patients no other cause of anemia than renal insufficiency(mean creatinine 1.9 ± 0.9 mg/dl, mean calculated GFR 50.8 ± 21.5 ml/min, no hemodialysis) was found; in 93.5% of these patients with renal insufficiency, measured erythropoietin levels were markedly lower than predicted[Beguin Y, Clemons GK, Pootrakul P, Fillet G. Quantitative assessment of erythropoiesis and functional classification of anemia based on measurements of serum transferrin receptor and erythropoietin. Blood

1993; 81(4): 1067-1076.]. There was an inverse correlation of hemoglobin levels with serum creatinine/creatinine clearance and a strong trend for inverse correlation of erythropoietin levels. All 12 patients treated with erythropoietin showed a significant increase in hemoglobin levels after three months returning to pre-treatment values within 3 months of cessation of therapy(before study 10.8 ± 1.1 g/dl, end of study 14.1 ± 1.7 g/dl, three months after end of study 11.6 ± 2.1 g/dl; p < 0.005). Quality of life was significantly improved in eight patients(75%). Conclusions: Anemia after heart transplantation is associated with moderate renal failure and low erythropoietin levels in most patients. Erythropoietin therapy resulted in increased hemoglobin levels in all and improved quality of life in 75% of patients. Erythropoietin may be a superior marker of functional renal impairment after heart transplantation; its therapeutic substitution allows effective anemia management and improves quality of life.

#### 促红细胞生成素对心脏移植后贫血的作用

背景:心脏移植后贫血常见,但其病因和治疗方面的资料不足。本研究中评价了贫血类型和促红细胞生成素治疗的作用。方法:对37例贫血的心脏移植受者(31例男性,59.1 ± 10.3岁,血红蛋白 < 120 g/L)进行包括促红细胞生成素测定在内的贫血全系列诊断检查。12例伴有肾衰竭的贫血患者(9例男性,64.1 ± 13.6岁)每周接受(1~3) × 4000 U的β-epoietin治疗3个月。治疗终点为血红蛋白水平和调查问卷确定的生活质量。结果:在31例患者中,除肾功能不全(平均肌酐水平 19 ± 9 mg/L,平均估计GFR水平 50.8 ± 21.5 ml/min,无血液透析)外未发现其他的贫血原因。这些肾功能不全患者中的93.5%其促红细胞生成素检测水平显著比预测值低。血红蛋白水平与血清肌酐/肌酐清除率呈负相关,与促红细胞生成素水平有强负相关趋势。3个月促红细胞生成素治疗后,所有12例患者的血红蛋白水平均显著升高,并在治疗停止3个月内恢复至治疗前水平(研究前 108 ± 11 g/L,研究结束时 141 ± 17 g/L,研究结束后3个月 116 ± 21 g/L, P < 0.005)。8例(75%)患者的生活质量得到显著改善。结论:大多数患者的心脏移植后贫血与中度肾衰竭和低促红细胞生成素水平相关。促红细胞生成素治疗使所有患者的血红蛋白水平升高,并改善了75%患者的生活质量。促红细胞生成素可能是心脏移植后功能性肾脏损害的优良标记物,其替代治疗可实现有效的贫血治疗并改善患者的生活质量。

(0140~0146 马超译 郭俊校)