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0919. Suppression of central sleep apnea by continuous positive airway pressure and transplant-free survival in heart failure: A post hoc analysis of the Canadian Continuous Positive Airway Pressure for Patients with Central Sleep Apnea and Heart Failure Trial(CANPAP)

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BACKGROUND - In the main analysis of the Canadian Continuous Positive Airway Pressure(CPAP) for Patients with Central Sleep Apnea(CSA) and Heart Failure Trial (CANPAP), CPAP had no effect on heart transplant-free survival; however, CPAP only reduced the mean apnea-hypopnea index to 19 events per hour of sleep, which remained above the trial inclusion threshold of 15. This stratified analysis of CANPAP tested the hypothesis that suppression of CSA below this threshold by CPAP would improve left ventricular ejection fraction and heart transplant-free survival. METHODS AND RESULTS - Of the 258 heart failure patients with CSA in CANPAP, 110 of the 130 randomized to the control group and 100 of the 128 randomized to CPAP had sleep studies 3 months later. CPAP patients were divided post hoc into those whose apnea-hypopnea index was or was not reduced below 15 at this time(CPAP-CSA suppressed, n = 57, and CPAP-CSA unsuppressed, n = 43, respectively). Their changes in left ventricular ejection fraction and heart transplant-free survival were compared with those in the control group. Despite similar CPAP pressure and hours of use in the 2 groups, CPAP-CSA-suppressed subjects experienced a greater increase in left ventricular ejection fraction at 3 months(P = 0.001) and significantly better transplant-free survival(hazard ratio[95% confidence interval] 0.371 [0.142 to 0.967], P = 0.043) than control subjects, whereas the CPAP-CSA-unsuppressed group did not(for left ventricular ejection fraction, P = 0.984, and for transplant-free survival, hazard ratio 1.463[95% confidence interval 0.751 to 2.850], P = 0.260). CONCLUSIONS - These results suggest that in heart failure patients, CPAP might improve both left ventricular ejection fraction and heart transplant-free survival if CSA is suppressed soon after its initiation.

心力衰竭患者中持续气道正压通气抑制中枢性睡眠呼吸暂停与未实施心脏移植存活率的关系:一项对 CANPAP 试验的事后分析

背景:在 CANPAP[加拿大中枢性睡眠呼吸暂停(CSA)合并心力衰竭患者经持续气道正压通气(CPAP)治疗]试验的主要分析中,CPAP 对患者的未实施心脏移植存活率无影响;然而,CPAP 仅使平均呼吸暂停低通气指数降至睡眠期间 19 次/h,仍高于试验纳入的阈值 15 次/h。此次对 CANPAP 的分层分析目的是检验如下假说:予 CPAP 治疗抑制 CSA 使呼吸暂停低通气指数低于此阈值可改善患者的左室射血分数和未实施心脏移植存活率。方法和结果:CANPAP 试验中纳入 258 例 CSA 合并心力衰竭患者,其中 130 例被随机分入对照组,128 例分入 CPAP 治疗组;3 个月后对 110 例对照组患者和 100 例治疗组患者进行睡眠检查。根据此时的呼吸暂停低通气指数是否低于 15 次/h,将 CPAP 治疗组患者再分为 CPAP-CSA 抑制组($n = 57$)和 CPAP-CSA 未被抑制组($n = 43$)。对比这两个治疗组与对照组之间左室射血分数的变化和未实施心脏移植存活率。尽管两治疗组间 CPAP 治疗的压力和应用时间相似,但是与对照组相比,CPAP-CSA 抑制组的 3 个月时左室射血分数明显提高($P = 0.001$),未实施心脏移植存活率也明显改善(HR 0.371,95% CI 0.142~0.967,$P = 0.043$),而 CPAP-CSA 未被抑制组两项指标均无明显改善(左室射血分数,$P = 0.984$;未实施心脏移植存活率,HR 1.436,95% CI 0.751~2.850,$P = 0.260$)。结论:上述结果表明,对于心力衰竭患者,若在 CSA 起始即利用 CPAP 得以抑制,CPAP 或许能既改善左室射血分数,又提高未实施心脏移植存活率。

0920. Long-term safety and efficacy of drug-eluting stents: Two-year results of the REAL (REgistro AngiopLastiche dell'Emilia Romagna) multicenter registry

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BACKGROUND - The long-term safety and efficacy of