Author's Accepted Manuscript

Chronotropic Incompetenceand its Relation to Exercise Intolerance in Chronic Obstructive Pulmonary Disease

Hai-jian Liu, Jian Guo, Qin-hua Zhao, Lan Wang, Wen-lan Yang, Jing He, Su-gang Gong, Jin-ming Liu



 PII:
 S0002-9629(16)30669-3

 DOI:
 http://dx.doi.org/10.1016/j.amjms.2016.12.015

 Reference:
 AMJMS361

To appear in: The American Journal of the Medical Sciences

Cite this article as: Hai-jian Liu, Jian Guo, Qin-hua Zhao, Lan Wang, Wen-lan Yang, Jing He, Su-gang Gong and Jin-ming Liu, Chronotropic Incompetenceand its Relation to Exercise Intolerance in Chronic Obstructive Pulmonary Disease, *The American Journal of the Medical Sciences*, http://dx.doi.org/10.1016/j.amjms.2016.12.015

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Chronotropic incompetenceand its relation to exercise intolerance in chronic obstructive pulmonary disease

Short Title: CI and exercise intolerance in COPD

*Hai-jian Liu MM³, *Jian Guo MM¹,*Qin-hua Zhao MM², Lan Wang MD², Wen-lan Yang MM¹, Jing He MM², Su-gang Gong MM²,Jin-ming Liu MD^{1,2}

¹Department of Pulmonary Function Test, Shanghai Pulmonary Hospital, Tongji University School of Medicine, Shanghai, 200433, China.

²Department of Pulmonary Circulation, Shanghai Pulmonary Hospital, Tongji University School of Medicine, Shanghai 200433, China

³Department of Respiratory Medicine, Ningbo No. 2 Hospital, Ningbo, Zhejiang 315000, China.

*Contributed equally

Corresponding author:

Jinming Liu

Department of Pulmonary Function Test and Pulmonary Circulation,

Shanghai Pulmonary Hospital, Tongji University School of Medicine,

Shanghai 200433, China

Tel:+86-21-65115006

Fax: +86-21-55663830

çc

E-mail: jinmingliu2013@126.com

دريافت فورى 🛶 متن كامل مقاله

- امکان دانلود نسخه تمام متن مقالات انگلیسی
 امکان دانلود نسخه ترجمه شده مقالات
 پذیرش سفارش ترجمه تخصصی
 امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
 امکان دانلود رایگان ۲ صفحه اول هر مقاله
 امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
 دانلود فوری مقاله پس از پرداخت آنلاین
 پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات
- ISIArticles مرجع مقالات تخصصی ایران