Letters to the Editor

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Physiotherapy in cardiac surgery

It is well known that the most common respiratory complications after cardiac surgery are related to the decrease in respiratory function and the presence of atelectasis [1]. Chest physiotherapy is widely indicated to minimize the adverse effects of cardiac surgery and immobilization along the hospital stay, such as vital capacity, functional residual capacity and the presence of atelectasis [2]. Conventional chest physiotherapy includes respiratory exercises and early mobilization of the patient. In the other hand, non-invasive ventilation is more and more used to intense respiratory therapies. However, how aggressive should physiotherapist be in the post-operative period?

The study by Franco et al. [3] is very interesting and adds important information to what we know about respiratory function and physiotherapy after cardiac surgery. This study aimed to assess the influence of conventional physiotherapy and non-invasive ventilation in pulmonary function in patients after cardiac surgery. Patients randomized to conventional physiotherapy performed diaphragmatic breathing exercises in association with mobilization of low and upper limbs, clearance maneuvers, relief of cought and lung reexpansion techniques. Patients randomized to non-invasive ventilation used BiPAP in spontaneous mode for 30 minutes twice a day with inspiratory and expiratory pressures of 8-12 cmH_2O and 6 cmH_2O, respectively. The authors showed that, after 48 hours of cardiac surgery, the patients in the non-invasive ventilation group showed greater respiratory function (tidal volume, vital capacity, expiratory peak flow, maximal inspiratory and expiratory pressures) in comparison to the conventional group. Moreover, respiratory rate, the score of atelectasis, heart rate, systolic and diastolic blood

pressures were lower in non-invasive ventilation group.

However, it would be important to have some data about the incidence of atelectasis, pulmonary complications and lung function along the hospital stay and follow up. Maybe the respiratory function and the incidence of atelectasis are not different along the patient's follow up, considering non-invasive ventilation and conventional physiotherapy. Also, an especial attention must be paid to the survival. This information is very important and could imply in cost and patient's well being [4].

This way, new trials are important to elucidate the best physiotherapy strategy in patients after cardiac surgery and its impact in respiratory function and survival.

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2. Herbst-Rodrigues MV, Carvalho VO, Auler JO Jr, Feltrim MI. PEEP-ZEEP technique: cardiorespiratory repercussions in mechanically ventilated patients submitted to a coronary artery bypass graft surgery. J Cardiothorac Surg. 2011;6:108.

3. Franco AM, Torres FCC, Simon ISL, Morales D, Rodrigues AJ. Assessment of noninvasive ventilation with two levels of positive airway pressure in patients after cardiac surgery. Rev Bras Cir Cardiovasc. 2011;26(4):582-90.

4. Carvalho VO. Phase 1 cardiovascular rehabilitation: be aggressive? J Cardiothorac Surg. 2011;6:140.

Answer

Dear Editor

In response to the letter of Carvalho and Jatene, firstly we would like to thank their interest in our research and their opportune comments. Carvalho and Jatene pointed that some data regarding the incidence of atelectasis, pulmonary complications and lung function along the hospital stay and follow up would be interesting.

In our study [1] none patient have experienced cardiac, renal, infectious or respiratory (besides atelectasis) post-operative complication. Only one patient in the conventional physiotherapy group (control group) had a minor stroke. There was no hospital mortality; however we

do not have follow up data beyond 30 days of hospital discharge. The mean time in the intensive care unit (ICU) was 2.3 days for the control group and 2.2 days for those who received non-invasive ventilation (BIPAP treatment group, *P*=0.442). The hospital stay was 9.3 days for the control group and 7.3 days for the BIPAP group (*P*=0.182).We do not have data regarding respiratory function after ICU discharge, but the evolution of the patients during its post-operative period in the ward was uneventful.

Social factors is the main reason for a post-operative hospital stay longer than the observed in developed countries, or even in Brazilian hospitals located in larger metropolitan areas. Regarding post-operative atelectasis, we did observed a higher incidence of more pronounced atelectasis in the control group, but the differences did not reached statistical significance, certainly due the size of our sample. However we have to consider that a level of significance below 0.5 is a convention, and we have obtained *P*=0.07. Therefore, the results may not have statistical significance, but certainly they have clinical relevance. However, all patients who experienced post-operative atelectasis completely recovered with additional specific respiratory therapy, mainly by means of incentive spirometry and/or intermittent positive pressure breathing through a mouth piece connected to a BirdMark 7®ventilator.

Best regards,

Alfredo J Rodrigues and Aline Franco - Division of Cardiothoracic Surgery - School of Medicine of Ribeirão Preto - University of São Paulo, Ribeirão Preto, SP, Brazil.

REFERENCE

1. Franco AM, Torres FCC, Simon ISL, Morales D, Rodrigues AJ. Assessment of noninvasive ventilation with two levels of positive airway pressure in patients after cardiac surgery. *Rev Bras Cir Cardiovasc.* 2011;26(4):582-90.

Congenital heart defects in the contryside of Northeastern Brazil: problems and solutions

Dear Editor,

I have been spending 10 years of my professional life working in the Northeast region of Brazil, initially in Barbalha-Ceará, Mossoró-Rio Grande do Norte and currently in Sobral-Ceará, and would like to present the difficulties faced so far in trying to develop a Congenital Heart Disease Service. The main difficulty is the contractualization with the payment source, our National Health System and its management, which is responsible for 99% of our surgical income. We managed to begin operating newborns, implemented the service with an outpatient clinic, physical therapy, pediatric cardiology and anesthesia, suitable material, but after a few months we started, a redistribution of funds of the Departments of Health was made, and the hospitals from the capital cities were in charge of the pediatric field.

But how? We were more than 500 km away in the first case, and 300 km, from the second and third cities. How can we make poor people, who barely had a place to live and feed in their homeland, travel to the capital and wait in long lines at public hospitals for a vacancy? What did we do? We continued our service did not discourage our group and continue operating patients over 12 years old, covered by the contractualization system, and the youngest ones could receive treatment through personal contacts with groups in the capital, and due to these difficulties, they created social organizations and support houses to help the system.

For better or worse, we could go ahead, operating on most urgent patients receiving administratively, and also refering patients to the Services in the capital. However, these support structures, private hospitals that helped the National Health System, could not survive the delays and negligence and, we now have a new difficulty, but we will not give up. Our Service has improved; the internalization of Medicine is a reality with the graduates of the first classes of medical schools returning after internships and residencies, joining the team to continue providing the best possible care to children with congenital heart disease [1-3].

Fabiano Gonçalves Jucá, Mamede Johnson Aquino Child - Sobral, CE

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Institute name

Dear Dr. Domingo,

First of all, I would like to express my great gratitude to you for your kindness to publish 7 of my article in your valuable journal *Rev Bras Cir Cardiovasc* in 2011. You have known that I strongly requested you to change my institute name when proofreading the last 3 articles. However, for the first 4 article (as listed below) have the same problems regarding my institute name.

1. Cardiac surgery and hypertension: a dangerous association that must be well known.
Yuan SM, Jing H.
Rev Bras Cir Cardiovasc. 2011 Jun;26(2):273-81.
PMID: 21894419 [PubMed - in process]

2. Osteopontin expression and its possible functions in the aortic disorders and coronary artery disease.
Yuan SM, Wang J, Huang HR, Jing H.
Rev Bras Cir Cardiovasc. 2011 Jun;26(2):173-82.
PMID: 21894406 [PubMed - in process]

3. Cystic medial necrosis: pathological findings and clinical implications.
Yuan SM, Jing H.
Rev Bras Cir Cardiovasc. 2011 Mar;26(1):107-15. Review. English, Portuguese.
PMID: 21881719 [PubMed - indexed for MEDLINE]

4. The implications of serum enzymes and coagulation activities in postinfarction myocardial.
Yuan SM, Jing H, Lavee J.
Rev Bras Cir Cardiovasc. 2011 Mar;26(1):7-14. English, Portuguese.
PMID: 21881705 [PubMed - indexed for MEDLINE] .

I have to ask your kind help to change my Institute name to:

Department of Cardiothoracic Surgery, Affiliated Hospital of Taishan Medical College, Taian 27100, Shandong Province, People's Republic of China;

Corresponding Address: Shi-Min Yuan, MD, PhD, Department of Cardiothoracic Surgery, Affiliated Hospital of Taishan Medical College, 706 Taishan Street, Taishan District, Taian 271000, Shandong Province, People's Republic of China.

I sincerely hope that you could do me this favor. I feel awfully sorry for this trouble that I bring to you. Thank you very much for your consideration. I am looking forward to hearing from you.

Best wishes.

Sincerely,

Shi-Min Yuan, MD, PhD, Professor of Surgery & Head Department of Cardiothoracic Surgery
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Taian 271000
Shandong Province
People's Republic of China
Tel 86 538 6236328

Book Chapter

Dear Prof. Braile,

I take this opportunity to congratulate you and ask for the publication of the Link of Editora In-Tech - Contemporary Pediatric in our RBCCV, where contributions were published in Pediatric Cardiac Surgery under the title: "Pediatric Cardiac Surgery: The Challenge of Skill and Creativity in Constant Search of Results ".

I would like to thank you for your attention and also wish to congratulate you for "just" honor received at the Brazilian College of Surgeons.

Sincerely

Miguel Maluf, São Paulo-SP

Dear Prof. Maluf,

We are happy to inform you that the book Contemporary Pediatrics, ISBN 978-953-51-0154-3, edited by Öner Özdemir has been released online.

The permanent web address of your chapter entitled "Pediatric Cardiac Surgery: A Challenge of Skill and Creativity in Constant Search Results" can be reached by clicking on the link

http://www.intechopen.com/articles/show/title/pediatric-cardiac-surgery-a-challenge-of-skill-and-creativity-in-constant-search-results

A team of experienced publishing professionals at InTech is working hard to promote your chapter, and every day we are getting more feedback from delighted users on portals such as ResearchGATE, Facebook and LinkedIn, in addition to growing coverage, traffic, page views and

downloads from specialized portals and blogs. Feedback shows that there is great interest in the books published by InTech. Members of the above portals are expressing immense gratitude to our authors for sharing their findings in Open Access publications.

We hope that you are as proud as we are, and we thank you once again for participating in this worthwhile project.

You can take a few simple steps yourself to help promote your publication to an even wider audience. These steps include:

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- Writing a soft introduction for a wider audience, so that InTech may include it in press releases for popular science news portals

We'll be glad to help you in bringing your work to the attention of your colleagues worldwide, so please do not hesitate to contact us.

We look forward to going forward with you into a bright future - a future where all scientists can harvest the benefits of sharing their ideas and connecting with their colleagues around the world.

Kind regards,

Ms. Sandra Bakic
Publishing Process Manager
InTech - Open Access Publisher

Prof. Paulo Pêgo receives ABC Scientific Publication Award

Professor Paulo Manuel Pêgo Fernandes, a member of the Editorial Board of BJCVS, and colleagues received the VII ABC Scientific Publication Award for the work entitled "Hemodynamic effects of experimental right ventricular overload" (available at: http://www.scielo.br/pdf/abc/v96n4/en_aop01811.pdf). This work is part of the doctoral thesis of the student Flavio Brito Filho, guided by Professor Paulo Pêgo.

The winning articles were selected by 30 national experts, and considered issues related to the originality and relevance of the research topic, the outline of the methodology, the impact of the results in its area of knowledge and the clarity and appropriateness of the conclusions presented.

The ABC Scientific Publication Award was established in 2005 by the Brazilian Society of Cardiology (SBC), with the aim of encouraging and recognizing the national scientific production in cardiology. In 2010, Professor Paulo Pêgo had already received this award for the work "Left sympathetic block by thoracoscopy in the treatment of dilated cardiomyopathy".