

Heart Congress

November 21-22, 2018 Osaka, Japan

Scientific Tracks & Abstracts



2ND GLOBAL HEART CONGRESS

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Heat exchange performance of actual and upcoming adult oxygenators

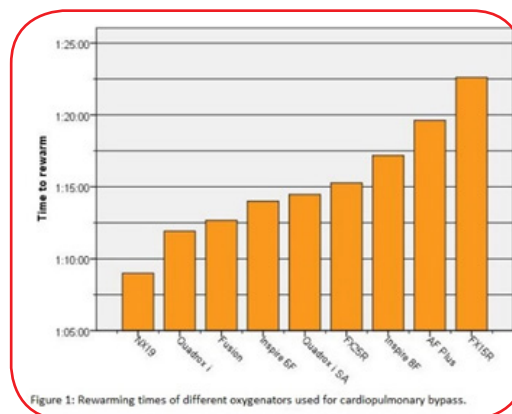
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Statement of the Problem: To standardize the tests for gas exchange capacity and heat exchange capacity of oxygenators used in a Cardio Pulmonary Bypass (CPB) circuit, the guidelines of the Association for the Advancement of Medical Instrumentation (AAMI) standards are used by manufacturers of CPB components (1, 2, 3, 4). Unfortunately, this standardized specification is not qualified at a consistent water flow rate (5). Actual Heater Cooler Units (HCU) use low pressure to achieve the water flow. Since the publication of mycobacterium chimaera prevention guidelines, different measures have been taken which results in a reduction of the water flow: location of the HCU outside the operating room with longer tubing as consequence, other type of tubing with a smaller internal diameter, connectors with shut-off valve. In combination with the difference in heater cooler unit water flow used by the different manufacturers, the benchmarking results might not be applicable in clinical setting. In order to get consistent results, the different oxygenators in this benchmark were tested under the same heater cooler conditions.

Method: All manufacturers on the Belgian market were contacted to provide a sample of their actual and/or upcoming oxygenator (s) with integrated arterial filter for testing purposes. The first part of the study was to quantify the water flow reduction through the heat exchange compartment of the oxygenator. The reference flow of the heater cooler unit was compared with the measured flow when the oxygenator was connected. The second part of the study was the time evaluation for rewarming 70 liters of tap water from 18 °C to 35 °C.

Findings: We observed a flow reduction between 0.97% and 61.17% and rewarming times between 1h 09' 00" and 1h 57' 12".

Conclusion: New guidelines to evaluate heat exchange performance of oxygenators have to be issued to get consistent, clinical reproducible benchmarks.



Biography

Mathias Allegaert is a European Board Certified Clinical Perfusionist active in different Belgian hospitals. He has completed his post-graduation in Clinical Perfusionist at the University of Leuven. He has his expertise in cardiopulmonary bypass, VAD program, is ELSO-Coordinator for the University Hospital of Antwerp and Reference Person for testing perfusion components and techniques in animal lab settings at the University of Antwerp. He is Secretary and Webmaster of the BelSECT (Belgian Society of Extracorporeal Technology). In 2016 and 2018 he was part of the Steering Committee of the International Symposium on Perfusion organized by BelSECT.

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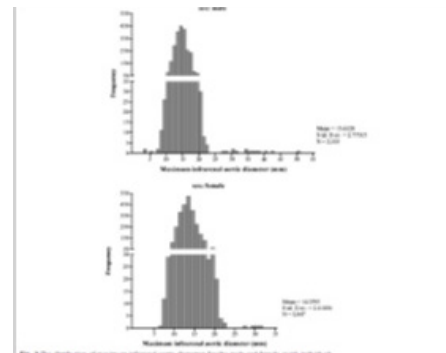
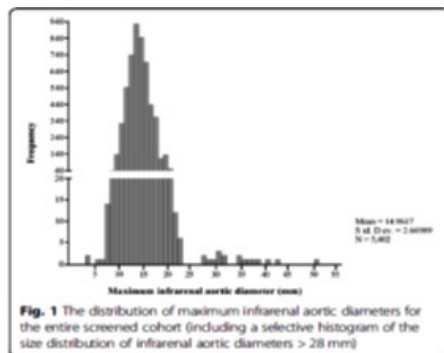
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Primary results of abdominal aortic aneurysm screening in the at-risk residents in middle China

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There is a lack of information on the epidemiological data and risk factors associated with Abdominal Aortic Aneurysm (AAA) in Chinese population. We reported the primary results from screening five-community population in Middle China for AAA. Methods: From March 2014 to October 2015, an AAA screening program was performed in three urban and two rural communities. These communities were randomly selected. All at-risk residents (a total of 6925) aged 40 years or older were invited to attend an ultrasound scan for AAA. At-risk population was defined as having a family history of first-degree relative diagnosed with AAA; or smoking and aged 55 years or older; or having a history of CAD, cerebrovascular disease, hypercholesterolemia, obesity (BMI ≥ 26 kg/m²) or hypertension. Results: The study investigated 5402 subjects and the mean age of them was 61.2 ± 10.4 years old. It included 2847 women aged 62.5 ± 10.4 years and 2555 men aged 59.7 ± 10.2 years. The mean maximum infrarenal aortic diameter (Max-IAD) was 15.0 ± 2.7 mm (from 4.1 to 51.5 mm). Eighteen people (aged 68.0 ± 10.4 years) with AAAs were detected (prevalence rate was 0.33%), and the prevalence rate in males was higher than in females (0.55% vs 0.14%, respectively, $P = 0.009$). Additionally, the screened subjects aged 55 to 75 years had a higher prevalence rate of AAA than other age groups (0.51% vs 0.11%, respectively, $P = 0.016$). Conclusion: Conclusion: The mean Max-IAD of the screened population in Middle China was apparently small by comparison with other reports. The result of low prevalence rate of AAA didn't support routine screening in Chinese population. The at-risk males aged 55 to 75 years should be targeted for further screening.



Biography

Dr Li master the basic clinical theory of vascular and endovascular surgery, and knows recent hot issues and advanced state of the field. With good experiences working and training in Vascular and endovascular surgery department. From Oct 15th, 2015 to Feb 28th, 2016, He was trained as Observership in Department of Vascular Surgery, Iowa Methodist Hospital. From Mar 1st 2016-Apr 30th 2016, He was trained as visiting scholar in Department of Vascular Surgery, Cleveland Clinic.

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Young Research Forum



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Can we predict medium term mortality from transvenous lead extraction pre-operatively?

Nadir Elamin, Khan M, Bowes R, Sahu J, Sheridan P, Rogers D, Kyriacou N, Kelland N and Lewis N
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Introduction & Aim: Lead extraction can be a high-risk procedure, but the outcome of cardiac device infection without intervention is poor. Recently risk factors to predict mortality within 30 days after Transvenous Lead Extraction (TLE) were described. We sought to examine survival up to 6 months post TLE.

Method: Retrospective analysis of all TLE procedures performed in a tertiary center from January 2010 to October 2015. Data was collected from an electronic database with reference to case notes as required. As per guidelines, complete success was defined as complete system removal while clinical success was defined as removal of all targeted leads and lead material or retention of a small portion of lead.

Result: 110 TLE procedures were performed, with mean SD of patient's age 70 ± 13 years. The indication was infection (local or systemic) in 101 patients. Extraction of 243 leads in total was attempted (mean 2.2 per patient). Median system implant duration was 6 years (interquartile range 4-9 years, oldest 22 years). A mechanical sheath (Evolution/Shortie) was used in 46 cases with femoral workstation in 26 cases. Complete success was achieved in 82/110 (75%) and complete or clinical success in 105/110 (95%). One intra-procedural death occurred (superior vena cava bleeding). A further 12 patients died within 6 months of TLE (despite complete system removal in 8), with mean time to death from operation of 87 ± 34 days. A complication due to the TLE procedure was more likely in this group (58% vs 21%, $P=0.01$). Patients that died at 6 months had a trend towards longer inpatient stay (42 vs 21 days, $P=0.05$). Three deaths occurred in hospital during the index admission and in all of these patients complete system extraction was not achieved. Patients dying within 6 months had a higher proportion of at least moderate-severe LV (Left Ventricle) dysfunction (83% vs 35%, $P=0.003$) and also 2 or more significant non cardiac co-morbidities such as respiratory, gastrointestinal, diabetes, neurological, renal or malignant disease (58% vs 9%, $P<0.001$).

Conclusion: This study indicates that medium term patient survival to 6 months post TLE may be predicted from both pre-operative clinical characteristics and operative outcome. The pre-operative factors should be used to inform the discussion of risks and benefits when considering whether to perform a TLE procedure. The relatively low rate of complete system removal may reflect the techniques used.

Biography

Nadir Elamin is a Cardiology Registrar at Sheffield Teaching Hospitals, Sheffield, United Kingdom. His interests include cardiology intervention and hospital management. He is also the Founder and currently leading the SJDA-UK group. He has several international, national and regional activities. He has obtained Full Membership of the Royal College of Physicians in 2015 and has several management contributions to different NHS hospitals.

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Mental and emotional stress among patients with acute coronary syndrome (MENEACS)

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Acute Coronary Syndrome (ACS) carries emotional stress and can sometimes lead to mental health illness. We, as cardiologists, focus mainly on the physical part and often don't assess the emotional and mental effects of the patients with ACS. There are many reasons why ACS patients' emotions might be affected. Some of this may be due to having to stop working while recovering from the illness and as a consequence they may face financial and social difficulties. But the key reason to cause emotional stress is the uncertainty about the prognosis of their condition. In United Kingdom, the cardiac rehabilitation program addresses some of the issues relevant to mental and emotional health in patients following admission with ACS and the British heart foundation provided an up to date guidance to patients on how to cope with stress. However, the cardiac rehabilitation does not objectively assess how much the patient with acute coronary syndrome is affected. Our aim from this study is to assess the level of anxiety and depression among patients following admission with acute coronary syndrome and underwent percutaneous coronary intervention. This includes patients with ST Elevation Myocardial Infarction (STEMI), Non-ST Elevation Myocardial Infarction (NSTEMI) and Unstable Angina (UA). This is an observational single center study. The hospital depression and anxiety scale are distributed among patients with ACS during their admission or in in outpatients' clinics. Data's also be collected from the medical notes or using our electronic system.

Biography

Nadir Elamin is a Cardiology Registrar at Sheffield Teaching Hospitals, Sheffield, United Kingdom. His interests include cardiology intervention and hospital management. He is also the Founder and currently leading the SJDA-UK group. He has several international, national and regional activities. He has obtained Full Membership of the Royal College of Physicians in 2015 and has several management contributions to different NHS hospitals.

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