World Congress on

Cardiology and Cardiac Surgery

May 16-17, 2018 | Montreal, Canada

Scientific Tracks & Abstracts

DAY 1

Diamond Fernandes, J Clin Exp Cardiolog 2018, Volume: 9
DOI: 10.4172/2155-9880-C4-098

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Navigating cardiovascular disease - Where is the gap between family doctors and cardiologists?

Diamond Fernandes
Heart Fit Clinic, Canada

Biography

Diamond Fernandes is your authority on cardiac rehabilitation and prevention. He is a graduate of the University of Calgary, and certified by the American College of Sports Medicine. He started his career with Total Cardiology Rehabilitation in Calgary, and was then recruited to go to Dubai, UAE. From there, he went on to manage the Kelowna (BC) Cardiac Rehabilitation Program before starting the Heart Fit Clinic in Calgary, AB. He serves on the executive board for the Canadian Association of Cardiovascular Prevention and Rehabilitation (CACPR). He is the published author of the book "Beating Heart Disease" and is the director of the Heart Fit Clinic. His focus is on an integrative approach to helping people prevent, halt, and reverse heart disease.

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Gibran Roder Feguri, J Clin Exp Cardiolog 2018, Volume: 9
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Preoperative carbohydrate load and intraoperative infused omega-3 polyunsaturated fatty acids positively impact nosocomial morbidity after CAGB: A double blind controlled randomized trial

Gibran Roder Feguri
General University Hospital, Brazil

Background: A strategy of limited preoperative fasting, with carbohydrate (CHO) loading and intraoperative infusion of omega-3 polyunsaturated fatty acids (ω-3 PUFA), has seldom been tried in surgery.

Aim: The aim of this study was to evaluate clinical variables, mortality and effects on the metabolism and inflammation after coronary artery bypass grafting (CABG)/cardiopulmonary bypass (CPB) in combination, if preoperative fasts are curtailed in favor of CHO loading, and ω-3 PUFA are infused intraoperatively.

Methods: Fifty-seven patients were randomly assigned to receive 12.5% maltodextrin (200ml, 2h before anesthesia), (CHO, n=14); water (200ml, 2h before anesthesia), (controls, n=14); 12.5% maltodextrin (200ml, 2h before anesthesia) plus intraoperative ω-3 PUFA (0.2g/kg) (CHO+W3, n=15); or water (200ml, 2h before anesthesia) plus intraoperative ω-3 PUFA (0.2g/kg) (W3, n=14). Insulin resistance and glucose control were analyzed.

Results: Two deaths occurred (3.5%), but there were no instances of bronchoaspiration and mediastinitis. Patients given preoperative CHO loads experienced fewer instances of hospital infection (P<0.05) and were less reliant on vasoactive amines during surgery (RR=0.60, 95% CI: 0.38-0.94; P=0.020), and while recovering in ICU (P=0.008). Groups given ω-3 PUFA experienced significantly fewer instances of POAF (RR=4.83, 95% CI: 1.56-15.02; P=0.001). Patients given preoperative CHO loads also got better glycemic control in ICU (P=0.015) and less need for exogenous insulin (P=0.018). Patients in the W3 Group presented lower values of the ultrasensitive CRP with 36 h of PO (P=0.008).

Conclusion: When implemented in conjunction with CHO loading and infusion of ω-3 PUFA during surgery, expedited recovery from CABG was observed.

Biography

Gibran Roder Feguri has completed his PhD from Federal University of Mato Grosso and is pursuing his Post-doctoral studies. He is a specialist in Cardiovascular Surgery and Artificial Cardiac Stimulation by the Brazilian Society of Cardiovascular Surgery (BSCVS). He is currently the Head of the Medical Residency Program in Cardiovascular Surgery at the General University Hospital (HGU/UNIC) and is a Professor at the same institution. He has published more than 10 papers in reputed journals and has been serving as a Reviewer in the Brazilian Journal of Cardiovascular Surgery, among others.

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Ravi Kumar Baral, J Clin Exp Cardiolog 2018, Volume: 9
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Right anterior minithoracotomy with conventional mechanical heart valve prosthesis initial experiences

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Tribhuwan University, Nepal

Background: Heart valve surgery from minithoracotomy has become in most centers worldwide but still is not much popular in our part of world in view of high cost involved. Suture less heart valve cost a lot in our part of world and has become most limiting factor for use of minithoracotomy in heart valve surgeries. We in our center have reexplored use of the conventional valve from right minithoracotomy aortic position.

Method: It is a review of a prospectively collected data of patient undergoing mini aortic valve replacement over one-year period. We have used conventional mechanical heart valve in aortic position in rheumatic aortic stenosis and regurgitation.

Result: Total 20 AVR has been performed from right anterior mini thoracotomy over one year. 12 (60%) of patient were male, one of the patient got reexplored from same incision for mediastinal bleeding. Mean total pump run and aortic cross clamp time was 96 and 88 minutes respectively.

Biography

Ravi Kumar Baral is a young and vibrant Cardiac Surgeon working in a position of Assistant Professor in the Department of Cardiothoracic and Vascular Surgery at University Hospital. He has completed his MCh in Cardiothoracic and Vascular Surgery in the year 2015. He has special interest in aortic surgery and mini-invasive cardiac surgery. He has performed more than 60 cases of mini atrial septal defect surgeries before moving into more complex valvular surgeries through a mini-invasive approach.

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DAY 2

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Beating Heart Disease - Is it even possible? How can we treat stable cardiovascular disease?

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Heart Fit Clinic, Canada

Biography

Diamond Fernandes is your authority on cardiac rehabilitation and prevention. He is a graduate of the University of Calgary, and certified by the American College of Sports Medicine. He started his career with Total Cardiology Rehabilitation in Calgary, and was then recruited to go to Dubai, UAE. From there, he went on to manage the Kelowna (BC) Cardiac Rehabilitation program before starting the Heart Fit Clinic in Calgary, AB. He serves on the executive board for the Canadian Association of Cardiovascular Prevention and Rehabilitation (CACPR). He is the published author of the book "Beating Heart Disease" and is the director of the Heart Fit Clinic. His focus is on an integrative approach to helping people prevent, halt, and reverse heart disease.

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Qingyu Wu et al., J Clin Exp Cardiolog 2018, Volume: 9
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Surgical results of Ebstein's anomaly based on pathology and techniques

Qingyu Wu and **Xiaoya Zhang**
Tsinghua University, China

Objective: The objective of this study was to evaluate the outcomes of patients who underwent the different techniques according to the pathology of Ebstein anomaly (EA).

Methods: From March 2004 to February 2017, 228 patients (mean age, 19.8±15.4 years; range, 7 months-64 years) with EA underwent 232 cardiac operations at our hospital. Twenty-nine patients had a prior cardiac procedure before. Among the patients in first procedures, 92 patients (46.2%) were categorized to Carpentier type C and 63 patients (31.7%) were type D, 7 patients (3.5%) had isolated anterior leaflet downward displacement. Anatomical repair were performed in 179 patients (Type B, n=35; type C, n=92; Type D, n=29; unclassifiable, n=7; reoperation, n=16), 1½ ventricle repair in 37 (Type D, n=33; reoperation, n=4), tricuspid valve repair in 3 (Type A, n=2; Type B, n=1), tricuspid valve replacement in 10 (7 reoperations), and Fontan procedure in 3 (TCPC, n=2; Glenn, n=1). Atrialized right ventricle was presented in 194 cases (168 excised, 6 incorporated). The pathology of 199 patients who underwent first procedures at our center described in Table 1.

Results: The mortality was 1.7% (n=4: anatomical repair, n=3; 1½ ventricle repair, n=1). Among these, 1 pathology type was Carpentier type C and 3 were type D. 1 A-V block (0.4%) newly occurred. 214 patients were available to follow up. The range of follow-up duration was 10 months to 13 years (mean, 7.3±3.2 years). Late survival was 99% (2 late deaths) at 10 years. Three patients received reoperation (reoperation rate, 1.3%; TVR, n=1; 1½ ventricle repair, n=2). Mean New York Heart Association class improved from 3.5 to 1.1.

Conclusions: The principle of the techniques is to reconstruct the tricuspid valve and right ventricle anatomically. For most cases, the anatomical repair was demonstrated with low mortality, less complications and excellent durability at long-term follow-up. The Carpentier classification cannot categorize all the patients. It is critical to choose applicable surgical techniques individually according to the pathologic morphology for EA surgical results. If the tricuspid valve is severely hypoplastic, 1½ ventricle repair and valve replacement may be alternative.

Tricuspid leaflet	Totally Abasent	Leaflet position			Leaflet Size	
		Normal	Displaced	Adherent	Normal	Small
Anterior	4	54	137	4	59	129
Posterior	70	17	105	7	5	124
Septal	65	9	113	12	3	131

Biography

Qingyu Wu has completed his graduation from Sun Yat-sen University of Medical Sciences in 1976, then worked at Fuwai Hospital, completed his MD at Peking Union Medical College in 1982 and trained at The Prince Charles Hospital in Brisbane, Australia. In 2004, he has moved to The First Hospital of Tsinghua University to establish a new Heart Center. He has practiced in Pediatric and Adult Cardiovascular Surgery for 42 years and had not only remarkably reduced the mortality of surgical treatment of coronary disease in China, but also created and improved a variety of surgical procedures in TGA, CABG, Ebstein anomaly, single ventricle, DORV, TOF and so on. He has published 278 papers and 14 books, won five times the National Science and Technology Progress Awards. He has been invited to perform operations in other countries for six times.

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Lale Hakami et al., J Clin Exp Cardiolog 2018, Volume: 9
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Is previous heart surgery a risk factor for heart-lung-transplantation?

Lale Hakami, Christian Hagl, Nikolaus Haas, Anja Lehner, Sarah Ulrich, Robert Dalla Pozza and **Anna Muehlbauer**
Ludwig Maximilians University, Germany

Introduction: Since the 1980s, heart-lung transplantation has been an effective method for the treatment of cardio-pulmonary diseases. Heart-lung transplantation is often the last choice to prolong the life or improve the quality of life of patients with complex congenital heart disease (CCHD) with "Eisenmenger-reaction" and pulmonary arterial hypertension. Especially in patients with CCHD, who underwent previous operations (group-A) and without any previous operation in group-B and were in end stage cardiopulmonary failure.

Methods: The study examined 51 patients, who were heart-lung transplanted in our hospital. We compared the patients into two groups: Group I in children younger than 18 years and Group II in adults older than 18 years. Particular postoperative parameters were collected by the inspection of files. Using the Chi-square test the significance of the results was shown. Survival is shown in Kaplan Meier curves and checked with the Log-Rank test.

Results: Among the 51 patients, there are 17 children and 34 adults. In the adult population, the incidence of congenital heart disease is dominant. In the children sample, there are also patients with pulmonary arterial hypertension. Fifteen with CCHD were in group-A, (4 children and 11 adults). The overall survival of the patients with a previous operation was 0.16 years in the median. The survival of group-B was in the median 8.03 years (p-value: 0.027). Six of the 15 group-A died within the first 30 years. In the group-B, four out of 36 died (p-value: 0.018).

Discussion: In the Chi-square test, a significantly higher 30-day mortality rate for the patients with previous operation. On the one hand, this could be caused by complicated anatomy and strong adhesions. On the other hand, there is a significantly higher rate of postoperative bleeding and early complications after heart-lung transplantation in the patients group with a previous operation, which could also be a cause for the higher 30-day mortality. In addition, the sample shows a clear advantage of the patient group with no previous operation in relation to the overall survival.

Biography

Lale Hakami has her expertise in Pediatric Cardiac Surgery in infants and newborn. She is a German-Board-Certified Cardiac Surgeon with a sub specialization in Pediatric Cardiac Surgery. From 2006-2008, she was the Junior Consultant of the Congenital Heart Surgery at the University Hospital Erlangen/Germany. From 2008-2009, she was Research Fellow at the Children's Hospital Boston, USA. From 2009 to 2011, she was the Director of Pediatric Cardiac Surgery in Mainz, Germany. From 2011-2014, she was the Senior Consultant in Children Heart Center in Linz, Austria. From 2014, she has been the Senior Consultant at the University Hospital Munich, Germany and University Lecturer of Pediatric Cardiac Surgery at Ludwig Maximilians University (LMU) Munich, Germany. Her particular experience is in single ventricle physiology and heart transplantation in infants and newborn.

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Single center results after cardiac transplantation in infants and small children

Lale Hakami, Christian Hagl, Nikolaus Haas, Robert Dalla Pozza, Sarah Ulrich, Anja Lehner and **Linda Haase**
Ludwig Maximilians University, Germany

Objectives: Heart transplantation is the last surgical option for infants and young children with congenital heart failure after failed conventional repair or palliative procedures. We aim to present our results in a retrospective and descriptive analysis.

Methods: Eighteen heart transplantations on children (nine females and nine males) were performed from 1988 to 2015. The range of age was between 0 days and three years. Indications for a transplantation were hypoplastic left heart syndrome (n=14), non-compaction-syndrome (n=2), Bland-White-Garland-syndrome (n=1) and transposition of the great arteries (n=1). Fourteen children (78%) had a previous cardiac surgery. Four patients (22%) required mechanical circulatory support for bridging: ECMO (n=2; 11%), or LVAD and ECMO (n=2; 11%). Fifteen (83%) underwent a biatrial method, three (17%) a bicaval one.

Results: The median waiting time after listing was 68 days (min: 0 days, max: 386 days, standard deviation (SD): 102.8 days). The overall survival was 61%, 13 children (72%) survived the first year. Two patients (11%) had transplantation. The median time patients spent at intensive care unit was 17 days (min: 1 day; max: 121 days). They were respirated for seven days (min: 1 day; max: 91 days). Perioperative factors we analyzed were: the median myocardial ischemia time was 236 minutes. The median aortic clamp time was 95 minutes; the median time of circulatory arrest was 60 minutes. Three children (17%) got a pericardial effusion. Two patients (11%) suffered each: bleeding, cardiac arrhythmias, diaphragmatic paresis and cerebral complications. Five (28%) got a lymphoproliferative disease. Seven children (39%) got a coronary graft vasculopathy. Two (11%) needed interventional therapy. Three (17%) got a cardiac pace maker. According to our data, six children had a rejection which called for treatment.

Conclusion: Heart transplantation is still the best therapeutic option after end-stage heart failure in children. Cumulative results suggest one additional year of life in more than 70% and a survival of more than 20 years are possible. These results were comparable to those of the ISHLT registry in pediatrics.

Biography

Lale Hakami has her expertise in Pediatric Cardiac Surgery in infants and newborn. She is a German-Board-Certified Cardiac Surgeon with a sub specialization in Pediatric Cardiac Surgery. From 2006-2008, she was the Junior Consultant of the Congenital Heart Surgery at the University Hospital Erlangen/Germany. From 2008-2009, she was Research Fellow at the Children's Hospital Boston, USA. From 2009 to 2011, she was the Director of Pediatric Cardiac Surgery in Mainz, Germany. From 2011-2014, she was the Senior Consultant in Children Heart Center in Linz, Austria. From 2014, she has been the Senior Consultant at the University Hospital Munich, Germany and University Lecturer of Pediatric Cardiac Surgery at Ludwig Maximilians University (LMU) Munich, Germany. Her particular experience is in single ventricle physiology and heart transplantation in infants and newborn.

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