ERIC D. CAINE//USA

MAJOR FOREIGN COLLABORATORS: YU XIN, MD; LI TAO, MD, PHD; XIAO SHUIYUAN, MD, PHD; MICHAEL PHILLIPS, MD, MPH; LI XIANYUN, MD; HELEN CHIU, MBBS; PAUL YIP, PHD – CHINA & HONG KONG SAR

PRESENTER: **ERIC D. CAINE, MD**

D43 TW009101

THE CHINA-ROCHESTER SUICIDE RESEARCH TRAINING PROGRAM (CRSRT)

Suicide takes more lives every year than war and homicide combined. The CRSRT, supported by the Fogarty International Center since 2001, promotes public health approaches to preventing suicide, attempted suicide, and their antecedents. Preventing suicide – and preventing people from becoming suicidal – serves as an entry key to the exploring and understanding the broad array of psychological, family, social, and cultural factors that contribute – or protect from – self-injurious behaviors.

The CRSRT involves a network of collaborators in Beijing (Institute of Mental Health; Beijing Suicide Prevention Center at Hui Long Guan Hospital), Hangzhou (Zhejiang University), Shanghai (Shanghai Mental Health Center), Changsha (Xiangya School of Public Health and Mental Health Center), Chengdu (West China School of Public Health and West China Mental Health Center), and Hong Kong (The University of Hong Kong; Chinese University of Hong Kong; Chinese University of Hong Kong). The CRSRT has focused on building infrastructure, training early career researchers, conducting research, and evaluating outcomes.

The work of the CRSRT follows a 4-step public health cycle: 1) define and assessing the problem $\Rightarrow$ 2) identify its causes (or risk factors) $\Rightarrow$ 3) develop *and evaluate* programs and policies $\Rightarrow$ 4) implementation and dissemination $\Rightarrow$ 1) re-assess the problem, etc.

This presentation will consider three examples of CRSRT training-research initiatives, considered as they fit into the public health cycle. The first, now well developed, involves research to understand how best to recognize and treat depression among multiply morbid Chinese elders in primary care settings (both urban and rural). This initiative reflects a multi-step developmental process that supported both training and research development, and now is being supported by a collaborative R01 from NIMH. The second project, at an earlier stage, focuses on mental health burden among women living in rural China, with particular attention to depression, family violence and suicidal thinking or behavior. It was supported by a supplement from FIC to the D43. Results now are being prepared for publication; these will be used to begin to consider local health service needs, and future grant applications. The third is nascent, using

the Internet as a vehicle for examining the spread of affect and suicidal thinking through social networks.

Each of these projects, arising from the interests of trainees and mentors, involves the development of supportive research infrastructure, definition of important questions whose answers potentially can drive the development of key fields, and formulation of a stepwise process that will support training as well as enhancing research productivity.

PI: Adriana B. Conforto/Brazil

Major foreign collaborator name: Leonardo G. Cohen/USA

Presenter name: Adriana B. Conforto

Grant number: D71TW009132-01

Grant title: Novel strategies for stroke rehabilitation (planning grant)

Abstract

Title: Translational neurorehabilitation research in the third world: what barriers to trial participation can teach us

Authors: Sarah M. Anjos, Leonardo G. Cohen, Annette Sterr, Karina N. F. de Andrade, Adriana B. Conforto

Abstract

Background and Purpose: Most stroke rehabilitation studies have been performed in high-income countries. The aim of this study was to identify the main barriers for patient inclusion in a research protocol performed in Brazil.

Methods: We evaluated reasons for exclusion of patients in a pilot, randomized, double-blinded clinical trial of stroke rehabilitation. Descriptive statistical analysis was performed.

Results: Only 5.6% of 571 screened patients were included. Recurrent stroke was responsible for exclusion of 45.4% of potentially eligible patients.

Conclusions: Almost half of the patients who fulfilled inclusion criteria for the study had history of previous stroke. In Brazil, rates of recurrent stroke are higher than those reported in high-income countries. External validity of rehabilitation trials will benefit from definition of study criteria according to regional characteristics of patients, including rates of recurrent stroke.

PI Name/Country: Linda B. Cottler/ United States of America

Major Foreign Collaborator/ Foreign Collaborating Country: Sanjeev Jain/ India

Presenter name SONAM ONGMU LASOPA

Grant number: D 43-TW009120

Grant title: Fogarty International Centre Indo-US Training Program in Non-Communicable Diseases

ABSTRACT

MENTAL DISTRESS AND NON-MEDICAL PRESCRIPTION DRUG USE: GENDER DIFFERENCES AMONG YOUTH 10 TO 18 YEARS IN THE US

Lasopa SO, Cottler LB & Ruktananchoi CW

University of Florida, Gainesville, FL

Aims: Prescription drug use is a significant public health concern. Risk for misuse of prescription drugs is increased among young females (Cottler et al, 2013; Zullig et al, 2012). Mental distress can be a modifiable risk factor for subsequent initiation into psychotropic drug use (Steffenak et al, 2011). The association between mental distress and non-medical prescription drug use (NMU) in youth across ten US cities was examined.

Methods: Data comes from the National Monitoring of Prescription Stimulants Study (NMAPSS) which surveyed 11,048 10 to 18 year olds via an entertainment venue intercept recruitment method. Nonmedical use (NMU) of prescription drugs (stimulants, anxiolytics and sedatives) was defined as use of prescription drugs other than by mouth, use that belonged to someone else, or use more than prescribed. Photos of pills were used to ensure proper recall. Socio demographic characteristics assessed include age, gender, race, and living situation. Self-reported mental distress (MD) included feeling sad, loss of interest in the last 12 months and feeling worried or stressed for more than 6 months. Use of other illegal drugs was also assessed along with ADHD, grades and suspension from school.

Results: Overall, 6.2% of girls and 6.6 % of boys reported any NMU in the past 30 days; a significantly higher percentage of girls (56% vs. 44%) reported MD compared to boys. Among girls who reported MD, 60% met criteria for NMU while it was slightly higher for boys (64 %). Multivariate logistic regression indicated that girls with MD were statistically more likely than those without to report NMU (OR for girls 2.103). MD was associated with NMU of prescription stimulants and sedatives among girls but not boys. Covariates adjusted for included age, race, living with parents, grades, ADHD, suspension in school and use of illegal drugs.

Conclusion: Increased risk of NMU of prescription drug use was found in girls 10 to 18 years reporting mental distress when compared with boys. The implication of gender difference in vulnerability to non-medical prescription drug use pertains to the promotion of targeted mental health prevention and intervention programs based on gender.

Financial Support: Fogarty International Centre Indo-US Training Program in Non-Communicable Diseases (Grant No D 43-TW009120; Sonam O Lasopa, Fellow; PI: Cottler).

NMAPSS was conducted under contract from Pinney Associates, Inc. Pinney is provided funding by Shire Pharmaceutical and Noven Pharmaceuticals.

Linda B. Cottler / United States

Sanjeev Jain/ India

Krishna Vaddiparti

D43 TW009120

Grant title: Indo-US Training Program in Behavioral Health Across the Lifespan

Abstract Summary

Title: **Cross-cultural issues in conducting HIV prevention intervention research among wives of heavy drinking men in Bangalore, India**

Women in India are at an enhanced risk for HIV infection through their husband's sexual activity outside marriage. Of the estimated 2.4 million people living with HIV/AIDS in India, nearly 1 million are women and this indicated a need for developing a community based HIV prevention intervention for women at risk. Our Indo-US Fogarty Training Program was the impetus for enhanced research capacity, and we developed sustainable partnerships. One of these was the World AIDS Foundation funded project in which we contextualized a Western-focused HIV prevention intervention for use with wives of heavy drinking men in an urban slum in Bangalore, India. We enumerated 509 households to select 100 wives of the youngest male 18-50 years old scoring 8+ on the Alcohol Use Disorder Identification Test (AUDIT). Women were equally randomized either to Standard Intervention (HIV pre-post test counseling) or to Enhanced Intervention (Standard + Group session 'Body-Wise'). Knowledge of HIV and STIs, communication with spouse and exposure to violence were assessed at baseline and two months post intervention. Assessments and interventions were adapted to the Indian setting to enhance gender and cultural relevance. The study team encountered several context-specific and cultural factors that could affect the results and fidelity of the study such as approval from institutional review boards, concepts and terminology, language, long distance collaboration and supervision, enumeration of households, gaining access to women for HIV prevention research and testing for HIV. In spite of these differences, we achieved 100% follow-up and intervention gains. With cross-cultural sensitivity and awareness, international HIV prevention research is feasible and can be highly successful in building long lasting collaborations and enhancing research capacity in LMICs.

Linda B. Cottler / United States

Sanjeev Jain/ India

Linda B. Cottler

D43 TW009120

Grant title: Indo-US Training Program in Behavioral Health Across the Lifespan

Abstract

Title: **Indo-US Training Program in Behavioral Health Across the Lifespan: Mentoring Mosaic**

Behavioral disorders across the lifespan contribute to the disease burden in developing and low and middle income countries, yet they receive little attention, especially regarding research training. Therefore the need to increase research capacity is large. With support of the Fogarty International Center, we initiated an Indo-US training program collaborating with a premier mental health institute in Bangalore, India in 2001. Research capacity was enhanced by building sustainable and enduring multidisciplinary collaborations with our partner institution for 13 years. We developed a mentoring mosaic that is based on an individualized apprenticeship-mentoring model with paired mentors from India and the US. Trainees are offered didactic and individual tutorials and after the fellowship, returning trainees continue their association with mentors in the US and India. Annual workshops conducted in India with trainees and mentors include training in the responsible conduct of research, “elevator talk” preparation, journal article reviews, and developing research proposals. The Indo-US team has made considerable progress building research capacity in India. As of October 2013, the training cohort included 16 trainees devoting from 4 to 36 months to training. Outcomes include 10 skill building workshops with 1047 participants, 101 speakers from India and the US, 327 publications in top tier journals; 47 academic awards; and 44 research grants from NIH as well as the Government of India. Our mentoring model proved to be successful in bridging the training gap in India. Based on the success of our first training program, we initiated our second Indo-US training program to build research capacity in the NorthEast Region (Assam and Sikkim) of India where the need for mentoring is great.

PI Name : Ghada El-Hajj Fuleihan-Lebanon-Collaborator: G Williams &Ellen Seely USA-Capacity building in chronic non-communicable diseases at AUB- NIH-FIC-4D43TW009118-02-

This D43 grant was awarded in Sept 2012, and its product the **Scholars in HeAlth Research Program** , SHARP, at the American University of Beirut (AUB) was launched in July 2013. This is a hybrid curriculum development and training grant aimed at capacity building in Non-Communicable Diseases (NCDs) in Lebanon and the region The 7 weeks intense 12 credits summer certificate program in quantitative methods graduated 19 students (short term training) , with equal distribution from both genders: 16 from Medicine, 2 from Nursing and one from Faculty of HeAlth Sciences. Its newly established Responsible Conduct of Research Module was attended by three PhD students at Faculty of Medicine and the EPI-Biostats-Large dataset modules by a PhD student in engineering. Four of the summer trainees have transitioned into intermediate training and completed analyses of a large cardiovascular data set made possible through a collaboration with University of Toledo, and co-authored 4 abstracts submitted at the American Association of Thoracic Surgeons [1,2] and to the American College of Cardiology [3,4].All four are accepted to complete 1-2 years of additional research at John's Hopkins University and Harvard University One of the summer trainees has proceeded to pursue additional credits needed to complete a PhD in Nursing at the University of Colorado, and three from the School of Medicine have enrolled in the similarly newly established SHARP Master of Sciences degree Program (long term training) The three students are in process of completing the write up of clinical trials protocols to be implemented in Lebanon and the region in the fields of cancer , osteoporosis, and maternal fetal medicine [5-7.] One Master trainee enrolled as research fellow in the Calcium Metabolism and Osteoporosis Program has finalized under the mentorship of the SHARP PD the first FRAX based Lebanese Osteoporosis FRAX based guidelines **Full Text /Presentation.**, guidelines that will be endorsed by a ministerial decree from the Lebanese Ministry of Health an activity with direct relevance to national Health Policy She will also be involved in the implementation of the first Fracture Liaison Service at AUB, a quality care intervention to improve outcomes in patients admitted with hip fractures
This substantial research productivity within the first year of the launch of SHARP speaks to the strength of the program in terms of curriculum faculty and trainees as well as to the gap it has filled for medical graduates at AUB with a clear commitment to research training at all levels . The tools acquired during this training and the topics chosen are at the heart of NCDs and are of direct relevance to Lebanon.

Underlined are names of SHARP summer trainees SHARP Faculty SHARP Summer PD SHARP PD at AUB

1.Time-varying Effects of Prior Intracoronary Stenting on Early-to-Late CABG Mortality in Diabetic Patients with Three Vessel Disease- Abstract.Victor D Nauffal1, Mohamad H El Zein1, Abdul-Karim M El-Hage-Sleiman1, Maroun B Yammine1, Ameer Kabour2, Thomas A Schwann3, Robert H Habib-1. American University of Beirut, Lebanon.

2.Increased Late Benefit of Multi-arterial CABG Compared to Intra-coronary Stenting in Multivessel Left Anterior Descending Coronary Artery Disease. Robert H Habib1, Robert F Tranbaugh2, Kamellia R Dimitrova2, Maroun B Yammine1,Abdul-Karim M El-Hage-Sleiman1, Darryl M Hoffman2, Charles M Geller2, *T A Schwann3.

3.Incremental Survival Benefit of One, Two and Three Arterial Bypass Grafting in Multivessel Coronary Artery Disease: The Effect of Diabetes Abstract-Thomas Schwann, Abdul-Karim M. El-Hage-Sleiman, Maroun B. Yammine, Robert Tranbaugh, Kamellia Dimitrova, Darryl Hoffman, Milo Engoren, Robert H. Habib,

4. Role of Completeness of Revascularization in Intermediate and Late Survival after Multivessel Coronary Artery Bypass Grafting Surgery Maroun B. Yammine, Abdul-Karim M. El-Hage-Sleiman, Thomas Schwann, Milo Engoren, Robert H. Habib

5.Randomized trial of Vitamin D in pregnant women with low 25 hydroxy-vitamin D level: maternal and neonatal outcomes. Marlene Chakhtoura.. Asma Arabi.Nick Harvey.Cyrus Cooper and Ghada El-Hajj Fuleihan

6.Prevention of aromatase inhibitor-induced bone loss using once yearly Zoledronic Acid: a randomized controlled trial. Maya Barake, Sally Temraz, Ali Shamseddine and Ghada El-Hajj Fuleihan

7.Cisplatin versus cetuximab in patients undergoing radiation therapy for locally advanced head and neck malignancies with acneiform skin rash secondary to cetuximab: a multi-center Phase III study Karine Al Feghali and Fady Geara. *Individual projects will be presented as posters*

PI name: Ghada El-Hajj Fuleihan, Lebanon

Collaborator: G Williams & Ellen Seely, USA

Maroun B. Yammine, MD
NIH-FIC-4D43TW009118-02, Capacity building in chronic non-communicable diseases at AUB

Role of Completeness of Revascularization in Intermediate and Late Survival after Multivessel Coronary Artery Bypass Grafting Surgery
Author Block: Maroun B. Yammine1, Abdul-Karim M. El-Hage-Sleiman1, Thomas Schwann2, Milo Engoren2, Robert H. Habib1,
1American University of Beirut Faculty of Medicine, Beirut, Lebanon
2Toledo Medical Center, Toledo, Ohio, USA
Incomplete coronary revascularization is associated with suboptimal coronary artery bypass grafting surgery (CABG) outcomes. Yet, it remains unclear if more bypass grafts than underlying coronary disease (CAD) would confer a significant survival benefit. Advancement of CABG surgical techniques such as employing sequential grafting approaches, Y and T-graft configurations, or utilization of additional grafting conduits (including more arterial grafts) have provided surgeons with the opportunity to construct more grafts. We aimed to quantify the effects of completeness of CABG revascularization in multivessel CAD.

Methods:
We analyzed 15-year CABG mortality in 7,157 patients [64.1±10.5yrs; 30% women] derived from 3 OH hospitals (1994-2011) who underwent primary non-salvage isolated CABG surgery with left internal thoracic artery to Left anterior descending graft. Completeness of revascularization index (CRI) was derived as the difference between number of grafts received and vessel disease (VD II/III). Patients were grouped by CRI: CRI = -1 (incomplete, N = 320; 4.5%); CRI = 0 (complete, N = 2882; 40.3%); CRI = +1 (N = 3050; 42.6%); CRI = +2 (N = 905; 12.6%). A propensity score was calculated using a non parsimonious logistic regression model that included patient characteristics and comorbidities, and operative characteristics. Propensity score adjustment was applied taking CRI=0 reference.

Results:
44% of the patients underwent Multi-Arterial CABG, 8.4% All-Arterial CABG, 41% used Radial artery grafts, 2.6% used Right Internal Mammary Artery grafts. 3303 (46%) patients had more than 3 grafts and 694 (9%) had more than 4 grafts, some reaching up to 7 grafts and Incomplete revascularization was relatively rare (4.5%). Patient characteristics were mostly significantly different among the different CR groups, and these were accounted for in the propensity score adjustment. Results and Conclusions pertaining to this analysis were submitted to the American College of Cardiology meeting for presentation at the 63rd Annual Scientific Session in Washington March 2014, and are not presented herein in respect of the ACC conference embargo on abstract content policy.
Role of D43-funded Scholars in HeAlth Research Program (SHARP) in this research: first and second authors are 2013 SHARP- intensive summer program graduates / trainees. The

research in this abstract represents an application of the quantitative methodology analyses learned by the trainees (first two authors) during their SHARP summer program and continued thereafter as part of their intermediate term SHARP training under the supervision of SHARP Summer Program Director and mentor Dr. Robert Habib.

PI Name: Ghada El-Hajj Fuleihan, Lebanon
Collaborator: G Williams & Ellen Seely, USA

Victor D Nauffal, MD
NIH-FIC-4D43TW009118-02, Capacity building in chronic non-communicable diseases at AUB

Time-varying effects of prior intracoronary stenting on early to late CABG mortality in diabetic patients with triple-vessel disease

Victor D Nauffal1, Mohamad H El Zein1, Abdul-Karim M El-Hage-Sleiman1, Maroun B Yammine1,
Ameer Kabour2, Thomas A Schwann3, Robert H Habib1
1American University of Beirut, Beirut, Lebanon; 2Saint Vincent Mercy Medical Center, Toledo, OH;
3University of Toledo Medical Center, Toledo, OH

Objective: Recent studies have indicated that early and intermediate term CABG outcomes in higher risk patients with prior intracoronary stenting are suboptimal. This is potentially due to inflammatory effects of stents and/or anatomic considerations due to suboptimal placement of bypass grafts. We aimed to study the impact of prior percutaneous coronary intervention with stent placement (PCI-s) on early, intermediate and late CABG mortality in diabetics with triple-vessel disease.

Methods: We reviewed the primary CABG without concomitant valve or aortic surgery experience from a single US institution (N=7,011; 1992-2006, Toledo, OH). Diabetic patients with triple-vessel coronary disease were considered for inclusion. Patients with preoperative renal failure, patients requiring emergency-salvage operations, or who did not receive ≥1 internal thoracic artery were excluded. A total of 193 patients with a history of prior balloon angioplasty were also removed. The remaining patients (1964) were divided to the two study cohorts: 1) patients with a history of prior PCI-s irrespective of when (n=211) and 2) no prior intervention [No-PCI (n=1753)]. To account for arterial grafting effects on survival, three separate comprehensive propensity (probability of PCI-s) models were derived for each of 3 arterial grafting (1, 2, ≥3) sub-cohorts. 1-to-1 greedy matching was used to match PCI-s and No-PCI patient pairs. Cumulative all-cause mortality was next derived by Kaplan Meier analysis and compared (log-rank test) at multiple maximum follow-up times. Lastly, time-dependent relative hazard function (PCI-s/No-PCI) was derived between 0 and 8 years.

Results: A total of 191 PCI-s patients were matched (90.5%) to No-PCI counterparts, and the matching procedure provided excellent matching of pre-operative risk factors and operative data with small standardized differences. Results and Conclusions pertaining to this analysis were submitted to the American Association For Thoracic Surgery (AATS) meeting for presentation at the 94th Annual Meeting in Toronto, April 2014, and are not presented herein in respect of the AATS conference embargo on abstract content policy.

Role of D43-funded Scholars in HeAlth Research Program (SHARP) in this research: The first four authors are 2013 SHARP- intensive summer program graduates / trainees. The research in this abstract represents an application of the quantitative methodology analyses learned by the trainees (authors) during their SHARP summer program and continued thereafter as part of their intermediate term SHARP training under the supervision of SHARP Summer Program Director and mentor Dr. Robert Habib.

PI name: Ghada El-Hajj Fuleihan, Lebanon

Collaborator: G Williams & Ellen Seely, USA

Maroun B. Yammine, MD
NIH-FIC-4D43TW009118-02, Capacity building in chronic non-communicable diseases at AUB

Increased Late Benefit of Multi-arterial CABG Compared to Intra-coronary Stenting in Multivessel
Left Anterior Descending Coronary Artery Disease

Author Block: Robert H Habib1, Robert F Tranbaugh2, Kamellia R Dimitrova2, Maroun B Yammine1,
Abdul-Karim M El-Hage-Sleiman11, Darryl M Hoffman2, Charles M Geller2, *Thomas A Schwann3
1American University of Beirut, Beirut, Lebanon2Beth Israel Medical Center, New York, NY;3University of
Toledo Medical Center, Toledo, OH

Objective: Superior intermediate and late term mortality has been reported after conventional multivessel coronary artery bypass surgery (CABG) with left internal thoracic artery to left anterior descending (LAD) graft plus saphenous vein grafts (LITA/SV), compared to percutaneous coronary intervention (PCI-s) using either baremetal (BMS) or drug-eluting stents (DES). Recent data showed that use of multiple arterial grafts improves late outcomes relative to conventional CABG. We tested the hypothesis that multiple arterial CABG, such as by radial grafting LITA/RA, will expand the CABG advantage over PCI-s.

Methods: Study patients were derived from 5237 multivessel, LAD disease patients undergoing first nonemergency coronary revascularization at a single hospital: 2716 CABG [1651 LITA/SV, 1065 LITA/RA] and 2521 PCI-s [839 early (BMS: 1998-02), 1682 recent (mostly DES: 2003-09)]. Patients with preintervention myocardial infarction <24 hours, shock or received left main stent were excluded. All-cause mortality for BMS and DES PCI-s were separately compared to single (LITA/SV) and multiarterial (LITA/RA) CABG using Kaplan-Meier analysis. For each comparison, greedy 1-to-1 matched sub-cohorts were obtained twice based on propensity scores for each treatment.

Results: Propensity matching yielded paired comparisons based on 296 to 472 matched pairs. All comparisons were highly matched with no significant differences in demographics, risk factors, triple vessel disease or distribution of proximal and distal LAD disease. Left main disease >50% was excluded from matching, and was much lower in PCI-s (6%) versus CABG (35%). Results and Conclusions pertaining to this analysis were accepted for presentation at the Plenary Scientific Session on Tuesday 29 April 2014 in the 94th Annual Meeting of American Association for Thoracic Surgery, April 2014 at the Metro Toronto Convention Centre in Toronto, ON, Canada and are not presented herein in respect of the AATS conference embargo on abstract content policy.

Role of D43-funded Scholars in HeAlth Research Program (SHARP) in this research: Abdul-Karim M El-Hage-Sleiman and Maroun B Yammine are 2013 SHARP- intensive summer program graduates / trainees. The research in this abstract represents an application of the quantitative methodology analyses learned by the trainees (fourth and fifth authors) during their SHARP summer program and continued thereafter as part of their intermediate term SHARP training under the supervision of SHARP Summer Program Director and mentor Dr. Robert Habib.

PI name/ Country: Ayeesha Kamran Kamal/ Pakistan
Major foreign collaborator name/ Foreign Collaborating COUNTRY: Dr Scott Kasner / USA
Presenter name AYEESHA KAMRAN KAMAL for the Stroke Program
Grant number: D43TW008660
Grant title: The International Cerebrovascular Translational Clinical Research Training Program

Abstract:

Title: Adaptation and Validation of a Community worker administered stroke symptom questionnaire in a peri-urban Pakistani community

Background: Stroke is the second leading cause of mortality and the leading cause of disability in the world today. The incidence of stroke is rising in low and middle income countries like Pakistan. However, there is little epidemiologic data from these countries to inform policy decisions. Stroke is one of the few conditions that are amenable to surveillance, but for this, validated tools that can be administered by community workers are needed. Our aim was to translate and adapt one such stroke symptom questionnaire, train community health workers (CHWs) in its administration and validate this package against assessment by two neurologists.

Methods: The study was carried out at Ibrahim Hyderi, a peri-urban slum of Karachi. Questionnaire for Verifying Stroke free status (QVSFS) which covers most of the common stroke symptoms was adapted and translated into Urdu. Two community workers received training by a neurologist which entailed teaching regarding stroke pathophysiology, symptomatology and detection. Using purposive sampling, the community workers selected 322 community dwelling subjects. Each worker collected data on these subjects. Two neurologists validated findings by assessing each subject. Sensitivity, specificity, positive and negative predictive values and Cohen's kappa was determined for the CHW administered questionnaire tested against assessment by two neurologists. SPSS version 19.0 was used to analyze data.

Results: Mean age of the participants was 56.5 years and 71% were women. Most were of Sindhi origin (82.6%) and employed in the fishing industry (60.9%). The overall sensitivity of the questionnaire for picking up stroke was 77% (95% CI: 64.1%-86.9%) and the specificity was 85.8% (95% CI: 83.5%-87.5%). The chance corrected agreement using the Cohen's Kappa statistic was 0.51 (95% CI: 0.38-0.60). Kappa ranged from 0.37 to 0.58 for each of the seven symptom questions. Hemi anesthesia (72.9%) followed by hemiplegia (64.6%) was the most sensitive symptom.

An important finding was the different performances of the two CHWs following the first training session, with one being significantly more sensitive (62.5% vs. 89.6%) and the other more specific (97.1 vs. 83.9%) in identifying individuals with stroke. Following a second

training session, data was collected on 10% subjects (n=34) again by each CHW while they were still blinded to the final assessment. There was an improvement seen in performance of both workers which became more uniform and agreement with neurologist improved from moderate to substantial.

The feasibility of the process of using CHW for stroke surveillance was high, with good community acceptance (<10% refusal to participate), average time for questionnaire administration being 7 minutes, and most subjects (87.8%) finding no difficulty in understanding questions.

Conclusion: We found reasonable sensitivity and specificity and moderate agreement between CHW administered stroke symptom questionnaire and assessment by neurologist. However, the questionnaire with the currently used level of training is operator dependent. Repeat training with feedback is needed before this package of stroke symptom questionnaire and trained CHW can be considered for large scale population screening.

PI name/ Country: Ayeesha Kamran Kamal/ Pakistan
Major foreign collaborator name/ Foreign Collaborating COUNTRY: Dr Scott Kasner / USA
Presenter name AYEESHA KAMRAN KAMAL for the Stroke Program
Grant number: D43TW008660
Grant title: The International Cerebrovascular Translational Clinical Research Training Program

Clinical and Lifestyle Determinants of Asymptomatic Intracranial Atherosclerotic Disease in Adults Undergoing MRI at Two Tertiary Care Centers in Karachi, Pakistan

Abstract

Background

The incidence of stroke has increased by 100% in the last four decades in developing countries like Pakistan. Intracranial atherosclerotic disease (ICAD) is the most frequent causative subtype of ischemic stroke in the world including Pakistan. ICAD is progressive narrowing of the arteries at the base of the brain due to atherosclerosis. After a stroke from ICAD, recurrence rate is highest in any sub-type of stroke, up to 28% with limited therapeutic options. Therefore, it is imperative to delineate the determinants of asymptomatic ICAD prior to stroke.

Objective

The objective of this study was to identify the clinical, lifestyle, dietary and psycho-social determinants of asymptomatic Intracranial Atherosclerotic disease (ICAD) in adults undergoing MRI at two tertiary care settings in Karachi, Pakistan.

Methodology

This observational cross sectional study was performed on 200 adult participants at the Radiology departments of two tertiary care centers of Karachi, Pakistan over a period of 3 months. The participants were first screened for stroke symptoms via the Questionnaire for Verifying Stroke Free Status (QVSS) by trained research officers. Those who did not report any stroke symptoms (QVSS –ve) were eligible to participate. The participants underwent a detailed medical history, socio demographic, lifestyle and anthropometric evaluation. All patients then received Magnetic Resonance Angiogram (MRA) .All MRA scans were viewed centrally and calibrated on special software Dicom Viewer 3.0 used for calculating the degree, distribution of stenosis.

Mean and standard deviations (SD) were calculated for continuous variables like age and BMI and proportions for categorical variables like education, ICAD, clinical and lifestyle factors. Principal Component Analysis was performed for Socio-Economic status (SES) and Dietary patterns and two major dietary patterns were identified; “prudent” and the “Western” patterns. An internationally standardized equation was used to calculate the degree of stenosis and intracranial stenosis was defined as any artery having >25% stenosis on MRA. The independent contribution of any risk factor to ICAD was examined in the Univariate and subsequent multivariable Cox proportional hazards model and prevalence ratios and 95% confidence intervals were reported.

Results

Of the 283 eligible participants approached, 200 participated in the study. Of these, asymptomatic ICAD was found in 34.5% (69) of the participants. Mean age of the participants was 37.13 (15.1) years with 62% (124) of the participants being younger than 45 years. There were an equal proportion of males and females in the sample population. Self-reported hypertension was 26.5%,(53) diabetes 9% (18) and dyslipidemia 5%(10) .ICAD was found to be most prevalent in people aged< 45 years, with higher levels of education, higher SES, increasing obesity, physical inactivity and western dietary pattern with increasing quintiles. Among the 3800 arteries studied of 200 patients, the posterior cerebral artery was found to be the most affected (42%; 37)) followed by vertebral (34%; 30) and MCA (22.7%; 20).Significant stenosis (≥50%) was found in 37.6% (32) of the arteries with 20% (17) being completely occluded.

After adjusting for other independent variables, results of Cox Regression analysis showed that among the socio-demographic factors, higher educational level and higher SES were found to be significantly associated with asymptomatic ICAD, while smokeless tobacco and increasing quintiles of western dietary pattern also increased the risk of ICAD. MRI associated findings of peri-ventricular lucencies were found to be significantly associated with ICAD.

Conclusion

ICAD preferentially affects the posterior circulation and is with modifiable lifestyle risk factors, mostly in younger individuals. Robust preventive programs incorporating diet, oral tobacco should focus on younger patients (< 45 years), and those experiencing demographic transition.

#12 PI: Richard Scheffler
PI Country: USA
Foreign Collaborator: Razvan Chereches
Foreign Collaborating Country: Romania (Main), Serbia, Moldova, Albania, Bulgaria
Presenter Name: **Razvan Chereches**

Grant #: 009122-03

Grant Title: Research Training: Socio-Economics of Mental Health Service Delivery in SE Europe

This training grant in Romania is in line with a program that has been going on for more than a decade. The program focuses on training researchers to address the major mental health problems in southeastern European countries that meet certain socioeconomic and health access criteria. This includes the financing of the mental health system, improving the quality of care, reducing stigma, and the training of an adequate health workforce. The program currently has 15 trainees from Romania, Serbia, Moldova, Albania, and Bulgaria.
The program is in collaboration with Razvan Chereches from Babes-Bolyai University in Romania. He has worked closely with PI Richard Scheffler to select the trainees, their mentors, and the design of their research projects. To build capacity in each country and across the region, each of the projects is developed using a team approach, meaning that studies are done within and across countries.

Two workshops are held annually, one in Berkeley, the other in one of the five countries in the program. All trainees and mentors attend the workshops consisting of didactic training in health economics, biostatistics, and medical sociology. Also, as part of the workshop each team makes a presentation at the beginning at the beginning of the workshop detailing their project ideas and work with their faculty mentors to update and improve the project throughout the meeting. At the end of the training session, trainees again present the updates projects. This model has been successful for over a decade and has produced a number of important papers in leading journals and texts.
There are three major challenges in this training program. One is to get the scholars from the different countries to understand the cultural, historic, and political difference among them but at the same time to see the common problems they have in the mental health field. The second has been the cumbersome and difficult process of getting human subjects approval, requiring large amounts of time and coordination. And thirdly to continue to monitor on a monthly basis the projects of each of the study teams and to move them forward to producing a first class piece of research.

PI name/ PI Country: Professor Brian Oldenburg, Monash University, Australia

Major foreign collaborator name/ Foreign Collaborating Country: Prof Edwin Fisher (University of North Carolina, USA), Prof KR Thankappan (Sree Chitra Tirunal Institute, India), Dr Prasad Katalunda (University of Colombo, Sri Lanka), Prof Khalid Kadir (Monash University, Malaysia)

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Grant number: 5D43TW008332-02

Grant title: Building the Asian NCoD Research Network for Regional Research Capacity

The World Health Organisation has predicted that over the next 10 years Asia will see a major increase in NCD related deaths. Currently, NCDs are responsible for over half of the disease burden in Asia and this burden is largely contributed to by diabetes, cardiovascular disease and its related conditions.

There is therefore an urgent need to identify and put into practice evidence-based NCD prevention and control strategies in these countries. The ASCEND (Asian Collaboration for Excellence in Non-Communicable Disease) Research Network provides an opportunity for early career researchers and health professionals in Sri Lanka, India and Malaysia to undertake high quality research training and a mentored research project in their own country with local institutes and organisations. It is expected that the majority of these trainees will eventually go on to become leaders in research, program implementation and/or policy leadership in their own country and the region.

There are currently 25 trainees enrolled in the ASCEND program with another 25 due to commence in June 2012. This program provides a combination of face-to-face teaching and online web-based learning over an 18 month period. The trainees receive foundation training in understanding the epidemiology and global burden of NCDs and its 'upstream' risk factors, research methods and evaluation, ethics and health promotion. The program also provides training and mentoring in leadership, communication skills, knowledge translation, writing for publication, and career development advice. Online sessions are conducted every fortnight. Furthermore, each trainee has an international mentor whose role is to support the career development of the trainees.

The majority of the trainees have made excellent progress. A number of them have either commenced a PhD or will commence within the next 12 months. A number of the trainees have also presented at inter(national) conferences and have published their research findings. Some of the trainees have also run workshops on research methods and NCDs in their own countries.

Because the program is mainly undertaken in the trainee's home country, this enables them to develop context specific 'real world' research skills.

The barriers encountered include: (1) insufficient funding to directly support research (2) ethics approval processes can sometimes be delayed (3) logistics and communication among trainees and faculty from many different countries can be challenging.

We are currently investigating the future potential of such a program to be fee-paying with sponsorship and support to come from national/regional institutes, other international organisations, WHO or Health Ministries.