



جمعية القلب الليبي  
LIBYAN CARDIAC SOCIETY

To learn more about the society's history, mission , objectives  
and membership options, please visit our website



[www.lcs.org.ly](http://www.lcs.org.ly)



جمعية القلب الليبي  
LIBYAN CARDIAC SOCIETY



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جمعية القلب الليبي  
LIBYAN CARDIAC SOCIETY

# THE FIRST EDITION

## OF THE LIBYAN CARDIAC SOCIETY NEWSLETTER

The Newsletter aims to publish meaningful content by publishing the society's news and activities, as well as a collection of useful articles and advice on a regular basis that will spread community awareness of the prevention and treatment of cardiovascular diseases.

visits the LCS website: [www.lcs.org.ly](http://www.lcs.org.ly)

## LIBYAN CARDIAC SOCIETY

20 years of giving, 600 members from all over Libya, the first meeting of the General Assembly was held on 2/2/2002 in Tripoli to launch its scientific activity and to be a beacon of science, aiming to raise the scientific level of healthcare professionals and reduce the the burden of cardiovascular disease in Libya.



Libyan Cardiac  
Society

جمعية القلب الليبية

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## NEWSLETTER – FIRST EDITION January 2023

- First Edition, (Volume 1): January 2023
- Electronic and Hard copies
- Can be downloaded at the society website (Newsletter section): English and Arabic

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Contact us: Email: [newsletter@lcs.org.ly](mailto:newsletter@lcs.org.ly)

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## About Us

The Libyan Cardiac Society (LCS) is a non-profit scientific society established in 2001 by 51 founding members and now has more than 600 members across Libya.

The first meeting of the General Assembly was held on the February 2nd, 2002 in the city of Tripoli. The LCS obtained the European Society Cardiac membership in 2004, then obtained the membership of the World Heart Federation & the International Society of Hypertension in the year 2010.

The LCS has education channels including the LCS website at [www.lcs.org.ly](http://www.lcs.org.ly). Also, the YouTube channel with livestreaming educational lectures.



## DON'T FORGET TO SUBSCRIBE



### The Society Mission:

The LCS aims to decrease the burden of cardiovascular disease in Libya, promote scientific research and raise public awareness about heart disease. The Libyan Cardiac Society provides many educational activities to its members and community including annual scientific meetings, conferences, workshops, lectures and webinar series.

### The Society Goals & Objective:

- 1- Contribute to scientific research in the field of cardiovascular disease.
- 2- Enhance the learning of the society members & provide most updated information & research updates in the cardiovascular field.
- 3- Organizing scientific conferences and symposia locally and contributing to the Arab and international scientific conferences.
- 4- Issuing scientific journals and periodicals related to cardiovascular disease. Cooperation with Arab, African and international scientific bodies and societies in the cardiovascular field.
- 5- Conduct research projects and field research and carrying out health awareness campaigns involving medical students and specialists in the field.
- 6- Strengthening scientific links and links between cardiovascular physicians, surgeons and other health professional allies at home and abroad.
- 7- Coordinating with other scientific societies that are concerned with health in all medical specialties.



## Welcome Message

### Dr. Osama Bheleel

President of Libyan Cardiac Society



Dear readers,

May the peace, mercy and blessings of Allah be upon you, on the occasion of the issuance of the first edition of the LCS newsletter. On behalf of the society board, I extend our gratitude to all society members for their trust, dedication and hard work to achieve the society mission and goals. We also welcome the new members from all over Libya, wishing them success and looking forward to their participation and bright ideas to support the society scientific and awareness activities.

We recently celebrated the World Heart Day in the largest public awareness campaign in Libya under the slogan "Use Heart for Every Heart". The society has played a critical role in reviving this occasion by holding awareness activities organized by the society members & volunteers throughout the country in order to increase community awareness of the seriousness of cardiovascular disease on individuals and society alike. The LCS aims to prevent cardiovascular disease by increasing public awareness & adopting healthy lifestyle pattern via regular exercise, healthy diet, weight loss and smoke cessation. We all know that prevention is better than cure & by following these simple preventive measures, together we can reduce the incidence of cardiovascular disease & its complications in Libya,

Finally, the LCS wishes you good health and prosperity.

Thank you,  
Dr. Osama Bheleel; MBBCh, Fachartz (Germany)  
President of Libyan Cardiac Society  
Interventional Cardiologist  
Tripoli University Hospital

### Dr. Abdulgani Abonowara

Editor-In-Chief of the LCS newsletter



Dear Colleagues,

Welcome to the LSC newsletter. It's my honor and the deep pleasure to introduce the first edition of the LCS newsletter to you. I'd appreciate you take the time to scroll through the first edition of the newsletter. Our hope is to provide you with an excellent material to read and keep you connected with the society news and activities, also to give you updates about the recent studies and guidelines, so we all can provide the highest standards of care and therapy to our patients.

As the Editor in chief of the LCS newsletter along with the wonderful, hardworking editorial board team, I would like to take this opportunity to express the deepest thanks and gratitude to all members the LCS members for teamwork to achieve the best standard of care to our patients. Special thanks to the efforts of the LCS president and executive board members for their excellent work and support. The LCS has contributed to lots of activities and we look forward to more of that including lectures, workshops and other educational activities. Hoping to increase our team work activities, aiming to improve the cardiac care to provide the highest standards of care to all patients, so it would be great to get suggestions from all of you.

The LCS newsletter is aimed to spread knowledge to help prevent and treat cardiac diseases, as well as to update the LCS members with the latest information in the field. It's a team effort so I would like to encourage you all to contribute to make it more successful with the help and blessing of Allah.

Best regards,  
Dr. Abdulgani Abonowara; MD, FRCPC, FACC  
Editor in chief of the Libyan cardiac society newsletter  
General and Interventional Cardiologist  
Associate Clinical Professor, McMaster University  
Niagara Health, SCG hospital, Ontario - Canada

## The Libyan Cardiac Society Executive Board Members:

### Dr. Osama Bheleel; MBBCh, Fachartz (Germany)

President of Libyan Cardiac Society  
Interventional Cardiologist  
Tripoli University Hospital

### Dr. Ali Elneihoum; MD, PhD

Vice-President of Libyan Cardiac Society  
Senior Consultant Cardiologist  
Professor Faculty of Medicine,  
Benghazi University

### Dr. Hatem Fageh; MSc

Master Degree Benghazi University  
Treasurer of Libyan Cardiac Society  
General Cardiac specialist,  
Tripoli University Hospital  
Lecturer at Tripoli University  
Lecturer in African Arab academy

### Dr. Hanifa Alrabte; MBBCh, MSc, Libyan Board

Master in Pediatric Cardiology, Italy, University of Sabiansa  
Scientific Affairs of Libyan Cardiac Society  
Associate Professor at University of Tripoli  
Chief of Pediatric Cardiology, Tripoli Children Hospital  
Mentor of CVS Syllables in Arabic African Academy

### Dr. Zaki Abettamer; MBBCh

Conference Affairs of Libyan Cardiac Society  
Consultant General Cardiologist  
Libyan International Medical University

### Dr. Aiman Smer; MBBCh, FACC, FASE

Media Affair of Libyan Cardiac Society  
Consultant General Cardiologist  
Associate Professor of Medicine  
Associate program director for cardiovascular fellowship  
program at CHI Health Creighton University Medical Center,  
Omaha, Nebraska, USA.

## Libyan Cardiac Society Newsletter Editorial Board:

### Dr. Abdulgani Abonowara; MD, FRCPC, FACC

Editor-In-Chief of the LCS newsletter:  
Associate Clinical Professor, McMaster University  
General and Interventional Cardiologist  
Niagara health, SCG Hospital, Ontario, Canada

### Dr. Omar Mangoush; MD, FRCS, MBBCh

Consultant Cardiac Surgeon,  
Venecia Hospital, Benghazi, Libya  
Lecturer, Faculty of Medicine, Benghazi University

### Dr. Osama Abuzuagaia; MD

Arab board internal medicine  
Lecturer, Misurata University  
Specialist, Misurata Cardiac Centre, Libya

### Dr. Basem Elbarouni; MBBCh, FRCPC, DRCPC

Associate Professor, University of Manitoba,  
Program Director, Interventional Cardiology Training Program  
Winnipeg, Canada

### Dr. Mansour Khaddr; MBBCh, FACC

Cardiovascular Diseases Specialist  
Cardio-Oncology  
Invasive Cardiologist  
Wyoming Medical Center, USA



## Scientific Sections of the LCS newsletter:

<b>A</b> Adult Cardiology	<b>D</b> Public health affairs: Health Educations and Heart Disease Prevention
<b>B</b> Pediatric Cardiology	<b>E</b> Cardiovascular Pharmacology
<b>C</b> Cardiac surgery	<b>F</b> Nurses and other health Alliances

## The LCS Work Groups List as following:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>Prevention of CVD Working Group</li> <li>Echocardiograph Working Group</li> <li>Heart Failure Working Group</li> <li>Interventional Cardiology Working Group</li> <li>Coronary Artery Disease Working Group</li> <li>Pediatric Cardiology Working Group</li> <li>Adult Congenital Heart Disease Working Group</li> <li>Arrhythmia and Cardiac Devices Working Group</li> </ul> | <ul style="list-style-type: none"> <li>Cardiac Surgery Group</li> <li>Valvular Heart Disease Working Group</li> <li>Cardiovascular Pharmacotherapy Working Group</li> <li>E-Cardiology Working Group</li> <li>BLS/ACLS Working Group</li> <li>Cardiac Nurses &amp; technicians Working Group</li> <li>Hypertension Working Group</li> <li>Myocardial &amp; Pericardial Diseases Working Group</li> </ul> |
|---|--|

**Note :** You can join up to 3 working groups.



### The LCS Working Groups

The society working groups are the backbone for the society scientific activities. We rely on the members of each working group to organize at least one educational activity per year. Herein, we invite you to join one of our working groups.

## Pioneers in Cardiology; Recognition and messages of gratitude:

### Dr. Senussi Ahmed Sunni:

The society is proud to choose one of its cofounders & figure, Dr. Senussi Ahmed Sunni to be on the "Pioneers in Cardiology" section for the first edition of the LCS newsletter. Dr. Sunni has contributed significantly to teaching & cardiac services in Libya. He sat a wonderful example to his students & colleagues. This section will be dedicated to highlight important figures in cardiology & express our appreciation & gratitude to all members who have dedicated their career to improve the cardiac services in Libya.



Retired Professor of Cardiology and General Medicine (1971-2016) "I envisioned providing quality healthcare services that would enhance prevention, diagnosis and treatment of heart disease to serve my people." Dr. S. Sunni.

Dr. S. Sunni had a scholarship 1964 for Medicine, graduated 1970 Bologna, Italy. and Joined department of Medicine in Central Tripoli Hospital 1971, there with Jordanian Cardiologist Khaled El-Khairi, they founded the first cardiology department in Libya. and he became the director of Tripoli Municipality polyclinics.

Dr. S. Sunni received his cardiology specialization certificate 1976 Padova, Italy and became a member of strategic national healthcare planning committees. He was assigned as consultant and director of the newly commissioned Tajoura Cardiac Center in 1976, that had seen its first open heart surgery in 1977 by visiting surgeons and its first cardiac catheterization in 1978. Postdoc cardiology fellow, PhD 1984, University of Alabama at Birmingham-USA, on diabetic cardiomyopathy and ischemic heart disease, fellow in echo lab. Return to Tajoura Cardiac Center as senior consultant cardiologist with the promotion to Professor position in 1994. In 1996, he was tasked to establish a fully functioning medical department and Cardiac Center at the newly built TMC, which he directed until 1997.

Dr. S. Sunni was one of founders of the Libyan Cardiac Society. With colleagues ESC recognition obtained in 2004. Libya's representee for health sciences in the Maghrib Academy for Science.

Furthermore, one of his highlight constitutions was volunteer work collaborating with enthusiastic colleagues from various specialties as mobile healthcare units-providing satellite and outreach specialized clinics in rural and suburban areas around the country. His volunteer work spanned a decade in Miatiga and included initiation of Sabratha Hospital Cardiology unit 2014.

"I am honoured to have been able to serve my people, the profession and participate in educating our future generations. I feel immense pride knowing that our graduates are successful both locally and internationally" Dr. S. Sunni.

### Dr. Senussi A Sunni; MD, PhD

Retired Professor of Cardiology and General Medicine (1971-2016)

*"I envisioned providing quality healthcare services that would enhance prevention, diagnosis and treatment of heart disease to serve my people." Dr. S. Sunni.*

LCS Cofounder



**(We highly appreciate what you have done. Your sacrifices and contributions didn't go unnoticed. Thank you).**  
Libyan Cardiac Society

## Interesting case reports:

# Case One

11/15/2022, 1.1.1

**Ebstein's anomaly with Secundum ASD and Muscular VSD:**

A 41-year-old female presented with palpitation & dyspnea for 4 years. No orthopnea, PND, chest pain or syncope reported. Her current medications are Frusemide & Aspirin. She was diagnosed as having secundum atrial septal defect (Secundum ASD) at a community hospital & referred to Tripoli University Hospital for further evaluation. Her exam revealed elevated JVP with prominent V wave, mild bilateral lower limb pitting edema, and precordial exam revealed pan-systolic murmur at the tricuspid valve area.

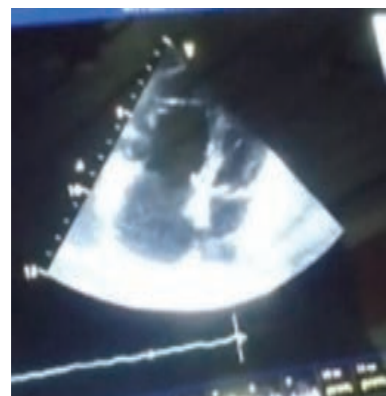
Echocardiography showed normal LV systolic function and small RV cavity, significantly dilated right atrium & apical displacement of the septal leaflet of the tricuspid valve toward the RV and severe TR in keeping with Ebstein's anomaly, presence of Secundum ASD with left to right shunt, was also found to have Muscular VSD with left to right shunt. (See Pictures attached). Her ECG was unremarkable. The TEE was not done yet due to technical reason. Booked for Holter monitor. She was referred for Cardiac surgery consultation assessment.

**Conclusion:** Ebstein's anomaly is uncommon congenital heart defect that can be associated with ASD and/or VSD. Ebstein's anomaly is also associated with high incidence of atrial fibrillation/flutter, so holter/ECG is important, to consider starting anticoagulation if needed. So, need to look for those defects and to consider surgical repair as per the guidelines criteria.

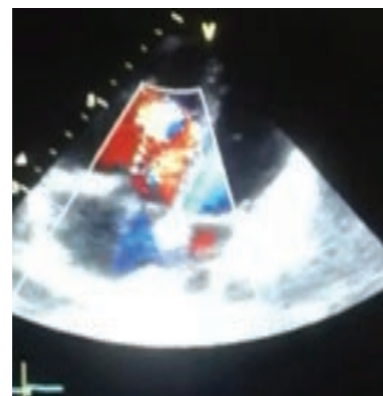
**Dr. Elham Omran Elgdhafi**

Assistant Professor, College of Medicine, University of Tripoli.

Non-invasive Consultant cardiologist, head of valve & anticoagulant clinic, Cardiology department, Tripoli University Hospital.



Picture 1: small RV cavity, significantly dilated right atrium and apical displacement of the TV



Picture 2: severe TR and VSD.



Picture 3: ASD.

## Interesting case reports:

# Case Two

11/17/2022, 1.1.2

**Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) with recurrent Ventricular Tachycardia**

A 39-year-old male who has no prior documented heart disease, presented with history of palpitation, tiredness and syncope for couple of weeks. He has no orthopnea, PND or chest pain. Had episodes of monomorphic ventricular tachycardia required electrical cardioversions. He was stabilized on Amiodarone and Bisoprolol. His CVS exam revealed elevated JVP with prominent V wave, mild bilateral lower limb pitting edema, precordial examination revealed pan-systolic murmur (PSM) at the tricuspid valve area.

ECG showed wide complex tachycardia in keeping with monomorphic Ventricular tachycardia. Other ECGs showed RBBB morphology with Epsilon waves (See the attached ECG). Echocardiography showed normal LV systolic function and severely dilated RV cavity with thin wall and small aneurysms noted (See the attached Echo images), Cardiac MRI showed fatty infiltration of the RV free wall and RV dilation with small aneurysms, RV biopsy and genetic testing confirmed the diagnosis Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) with recurrent Ventricular tachycardia. The patient was referred to EP, underwent VT ablation and ICD implantation for secondary prevention. Family screening revealed that his brother has the same disease.

**Conclusion:** Arrhythmogenic right ventricular cardiomyopathy (ARVC) is uncommon familial disease associated with recurrent ventricular tachycardia. ARVC should be in the D/D when assessing young patients with monomorphic ventricular tachycardia. Family screening was recommended. ARVC patients to be referred for EP team for ICD and possible VT ablation.

**Dr. Abdulgani Abonowara**

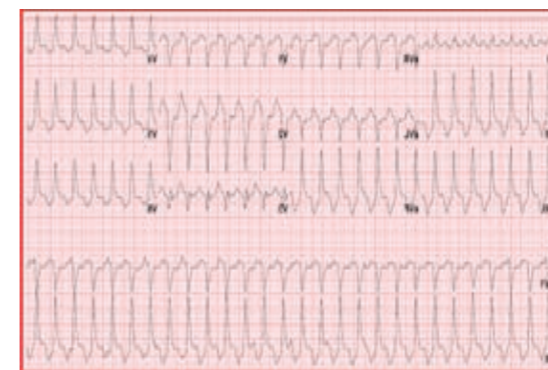
MD, FRCPC, FACC

General and Interventional Cardiologist

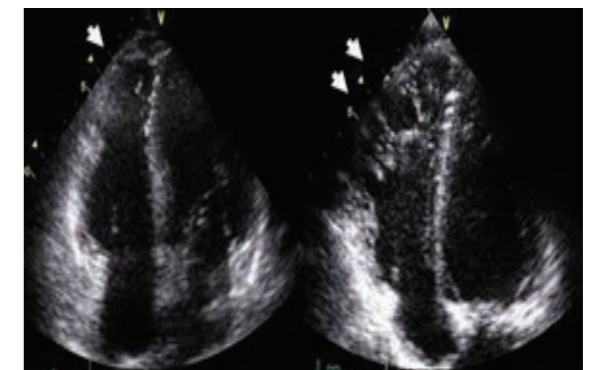
Associate Clinical Professor,

McMaster University

Niagara Health, SCG Hospital, Ontario, Canada



Picture 1: ECG of monomorphic VT.



Picture 2: Echo showing severely dilated RV cavity with thin wall and small aneurysms.

## Interesting cases reports:

# Case Three

11/22/2022, 1.1.3

### Rheumatic Fever led to the Discovery of Congenital Heart Defect:

A 15-year-old-male who is from a large family lives in a crowded place, he presented with fever, arthritis and tachycardia. His physical examination revealed tachycardia, his weight was 70 kg, tall stature, difficult to feel femoral pulse and pericardial exam was otherwise unremarkable. He was admitted to a local hospital, at that time his ASO titer was 1200 IU, CRP was 200 and ESR was 100. His initial Echocardiogram showed mild MR, mild AR. He was diagnosed as having rheumatic fever with rheumatic carditis which was treated with aspirin and steroid.

After discharged from the local hospital the patient came to Al Hawary Hospital cardiac clinic for follow up, Repeat Echocardiography showed left ventricular hypertrophy, not explained from MR, and AR, The aortic valve was bicuspid and no aortic valve stenosis the aortic arch was abnormal and no clear turbulence. He was found to have very high blood pressure at 200/170 mmHg.

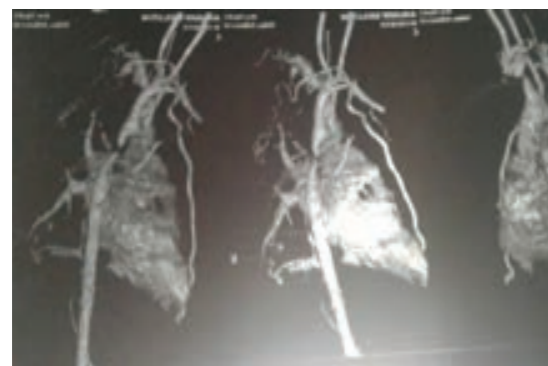
I did CT angiography of the aorta that showed coarctation of the aorta with collaterals and cardiac catheterization aortic angiogram through femoral artery that showed interrupted aortic arch and ascending aorta angiogram through radial artery showed dilated mammary artery and collaterals (See the 2 attached images respectively).

The patient underwent repair of his coarctation of the aorta with conduit insertion and his hypertension was controlled by medications.

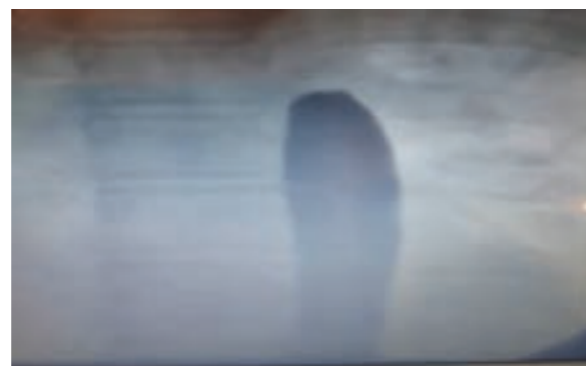
**Conclusion:** Rheumatic carditis can present in patients with congenital heart disease, we have to check blood pressure routinely for every patient even if the patient was asymptomatic especially before using steroids and to look for any causes like coarctation of the aorta.

#### Prof. Rasmia Husni Feituri

Consultant pediatric cardiologist  
Al Hawary General Hospital  
National Heart Center, Benghazi University



Picture 1: Coarctation of the aorta with collaterals.



Picture 2: Angiogram showing interrupted aortic arch.

## Updates in Cardiology

# Report One

11/22/2022, 1.1.4

### Clinical Inertia:

Inertia is a physical concept and it is property of a body by virtue of which it opposes any agency that attempts to put it in motion or if it is moving to change the magnitude or direction of its velocity.

It has been adopted in the medical field to express the lack of change in motivation. The therapeutic or clinical Inertia is defined as a measurement of the resistance to therapeutic treatment for an existing medical condition. Another definition is: lack of treatment intensification in a patient not at evidence-based goals for care.

Traditionally, the medicine is aiming to relieve the symptoms of the patients. In the modern medicine the healthcare providers are facing diseases which are asymptomatic at least in the early stages of the medical disease. Diseases like diabetes, hypertension and hyperlipidemia are often with no symptoms and are examples of conditions in which clinical inertia is seen in clinical practice.

Clinical inertia is due to at least three problems: overestimation of care provided; use of "soft" reasons to avoid intensification of therapy; and lack of education and training aimed at achieving therapeutic goals.

Most of the physicians who are taking care of the cardiac patients feel reluctant to adjust the doses of the medications or introducing a new treatment option to the patient. Their argument is that the patient is doing his daily activity with no limitation, so what is the rationale of changing the current treatment.

This resistance to change is a worldwide problem and resulting in suboptimal treatment achievements in reaching the guidelines directed medical therapy.

Tackling clinical inertia necessitates revising the medical education programs. The aim of the medical care is not just relieving the patient symptoms but to achieve the maximum tolerated guidelines directed medical treatment. Needs to build up a system of performance feedback and reminder for the treating physicians to ensure giving the optimal necessary care.

#### Dr. Osama Bheleel

MBBCh, Fachartz (Germany)  
Interventional Cardiologist  
Tripoli University Hospital

## Research projects, publications and Guidelines: Cardiologist updates, New Studies and Landmark Trails

# Report Two

11/22/2022, 1.1.5

**Prevalence of hypertension and pre-hypertension among diabetics and degree of recommended control of Blood Pressure at Benghazi diabetes clinic**

**Hani M. Elgahwagi, MBBCh, MSc, Libyan Board, PGCDV diploma; Prof. Ragab B. Roaied MBBCh, M.MED, MD; Prof. Ahmed A. Toweir MBBS, MPH, DTCD, PhD.**

A cross sectional study design was used, the study conducted in BDC in Sedi-Hussein polyclinic in Benghazi city in Libya during the period from 1st January to the end of March 2006. The study included 1,265 diabetic patients selected blindly without any previous information regarding their BP status and the data collected by structured face to face interview, physical examination and record review.

Of all patients 57.2% were females and 42.8% were males. Mean age of all patients was (56.8 years  $\pm$  11.1) with mean duration of diabetes was (11.3 years  $\pm$  8.1) and mean BP (143.1 $\pm$ 27.4/76.5 $\pm$ 14.5). The prevalence of hypertension was 58.3% with mean BP (156.2 $\pm$ 24.4/80.5 $\pm$ 14.8). The prevalence of pre-hypertension was 8.3% with mean BP (128.2 $\pm$ 5.3/74.6 $\pm$ 9.9), while the prevalence of stress hypertension was 14.4% with mean BP (141.5 $\pm$ 21.2/77.8 $\pm$ 11.7). Among hypertensive patients 64.6% of them were known hypertensives with mean duration (9.5 years  $\pm$  7.9) and mean BP (157.1/81.3) and 35.4% of them were unknown hypertensives with mean BP (154.5/79),

And among the known hypertensive patients 90.6% were uncontrolled to the recommended target BP goal (i.e. BP<130/80 mmHg) with mean BP (161.6/83). The logistic regression test showed significant relation between the increasing the risk of development of hypertension and the following: duration of diabetes (OR=1.034, P=0.001), Age groups >55 years for males and >65 years for females (OR=1.726, P=0.001), Family history of hypertension (OR=1.677, P=0.001), Retirement of males from manual job (OR= 6.531, P= 0.011), Retirement of males from semi-manual job (OR=14.124, P=0.025).

By classifying the known diabetic hypertensive patients into different groups according the number of their prescribed antihypertensive drugs the following revealed; 0.4% were on four drugs, 3.6% were on three drugs, 17% were on two drugs, 71% were on one drug and 8% were only on diet control.

Among the known diabetic hypertensive patients 56% of them were noncompliant to hypertensive diet and 28.5% were noncompliant to antihypertensive drugs. Among the diabetic non-hypertensive patients 59.9% of them were noncompliant to diabetic diet and 28.4% were noncompliant to antidiabetic treatment, there were no significant statistical difference in the compliance between antihypertensive drugs group and antidiabetic drugs group (P=0.860). The main reasons behind the noncompliance to the prescribed antihypertensive drugs were; noncompliance per se 55.2% and lack of money 31.2%.

**Conclusion:** The prevalence of hypertension is high (58.3%), poorly controlled (9.4% only controlled), with large proportion are still un-diagnosed (35.4%) among the diabetics in the present study. High percentages (65.6%) of the diabetic patients in the present study were found to have vascular complications. Inadequate prescription of antihypertensive drugs, poor compliance and unavailability of antihypertensive drugs were the major causes of the existing poor control. Despite that the prevalence of pre-hypertension was found low (8.3%) in the present study but still remains an emerging new health problem.

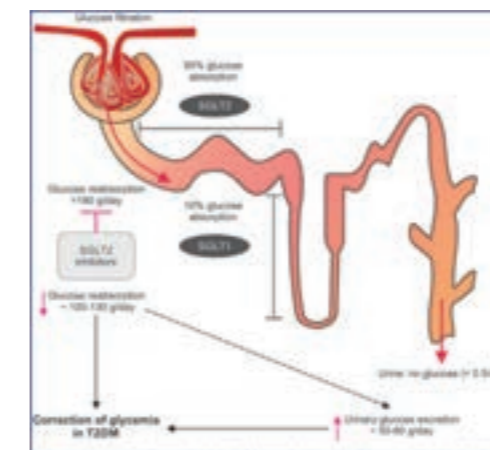
## Research projects, publications and Guidelines: Cardiologist updates, New Studies and Landmark Trails

# Report Three

11/22/2022, 1.1.6

**Sodium glucose cotransporters inhibitors**

(SGLT2Is); (AKA gliflozins or flozins); These medications work on SGLT2I in the PCT in the kidney. They act by inhibiting SGLT2Is and they are used in the treatment of heart failure (HFrEF/HFpEF) and type II diabetes mellitus (T2DM). Apart from blood sugar control, gliflozins have been shown to provide significant cardiovascular benefit.



Picture 1: Mechanism of action of SGLT2I

This table shows the pharmacokinetic parameters of 3 commonly used SGLT-2 inhibitors:

Name of drug	Bioavailability	t1/2 (hours)	Dose (mg/day)
Canagliflozin (Invokana)	65%	10.6	100-300 mg
Dapagliflozin (Forxiga)	78%	12.9	5-10 mg
Empagliflozin (Jardiance)	90-97%	13	10-25 mg

SGLT2 Inhibitors Reduce Risk for HF Mortality and hospitalization: Heart failure (HF) is the most common cardiovascular cause of hospitalization in people over 60 years affecting about 64.3 million people worldwide. In patients with diabetes, SGLT2Is significantly reduced cardiovascular mortality and hospitalization with strong evidence. There are several clinical trials have shown that.

SGLT2I Meta-analysis: that included several studies that investigated the role of sodium glucose cotransporter inhibitors (SGLT2Is) in patients with HF without and without diabetes. All clinical trials that compared the effect of SGLT2Is versus placebo on patients with HF, that pools "data from 13 clinical trials and more than 75,000 patients" now "confirms the clinical benefit of sodium glucose cotransporter 2 (SGLT2I) inhibitors for patients with heart failure (HF).

**Conclusion:** SGLT2I reduced HF hospitalization in patients with and without diabetes, as well as reduced the risk of cardiovascular mortality in patients with diabetes.

**Dr. Abdulgani Abonowara; MD, FRCPC, FACC**

General and Interventional Cardiologist  
Associate Clinical Professor,  
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Niagara Health, SCG hospital, Ontario - Canada

## Research projects, publications and Guidelines: Cardiologist updates, New Studies and Landmark Trails

# Report Four

11/22/2022, 1.1.7

REVIVED-BSC trial (The ESC Congress; Barcelona - Spain; Aug. 2022

The ESC Congress was held in Barcelona in person on August 26th-29th 2022. One of the highlights of the conference was the REVIVED-BSC trial. PCI versus medical therapy in patients with left ventricular systolic dysfunction and extensive coronary artery disease. A total of 700 patients were included in the study. The average age was 69 years, were predominantly male, with most having minimal symptoms of CHF, (around 75% had NYHA I-II symptoms), and angina (Majority had no angina, the rest had CCS I-II angina). The mean EF was 27%. Around half of the patients had two vessel disease while 14% had left main disease.

The median follow-up duration was 41 months. The primary outcome was equal in both groups, occurring in 37.2% of the PCI group vs 38% of the OMT group (HR 0.99; CI, 0.78 to 1.27, P=0.96). A total of 31.7% of patients died in the PCI group vs 32.6% in the OMT group (HR 0.98; 95% CI, 0.75 to 1.27). Nor did PCI lead to an improvement in ejection fraction. Based on these findings, the authors conclude that, among patients with severe left ventricular dysfunction who received optimal medical therapy, revascularization by PCI did not result in a lower incidence of death from any cause or hospitalization for heart failure.

The findings of the trial add to a long list of evidences in which PCI failed to improve hard outcomes in patients with chronic coronary syndrome. These were not low risk patients, with a third of the population dying within 3.4 years of follow up. While the follow up might be considered short, especially in light of the STICH trial, there was no hint of curve separation or an early hazard with PCI to suggest that longer follow up might show benefit. On the other hand, despite the low burden of symptoms, PCI did seem to offer better early quality of life (based on the KCCQ score), although the difference diminished with time. There was a reduction in spontaneous myocardial infarction in the PCI group, a finding in keeping with the ISCHEMIA trial.

It was unclear why patients were not considered for CABG. Were patients deemed not surgical candidates? Or was the extent of disease felt not to warrant surgery? Half of the patients had two vessel disease only. This does raise the concern some of the enrolled patients might have a primary cardiomyopathy with incidental finding of coronary artery disease, as opposed to true ischemic cardiomyopathy. Nevertheless, the findings do have a significant impact on our practice.

**Conclusion:** PCI in patients with reduced ejection fraction and a low burden of clinical symptoms should not be done routinely and only considered in selected cases.

**Dr. Basem Elbarouni**

MBBCh, FRCPC, DRCPC

Associate Professor, University of Manitoba, Program Director, Interventional Cardiology Training Program  
Winnipeg, Canada

## Research projects, publications and Guidelines: Cardiologist updates, New Studies and Landmark Trails

# Report five

11/22/2022, 1.1.8

INVICTUS TRIAL

Rivaroxaban in Rheumatic Heart Disease- Associated Atrial Fibrillation.

A multicenter international randomized trial of 4565 patients with atrial fibrillation and rheumatic mitral valve disease (MVA < 2cm2) randomized to rivaroxaban versus warfarin. The mean duration of follow up 3.1 years. The primary outcome, composite of stroke, systemic embolism, myocardial infarction or death occurred 8.21% per year in the rivaroxaban versus 6.49% per year in the vitamin K antagonist group as shown in figure 1.

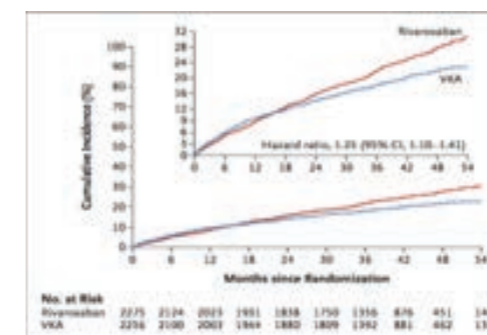


Figure 1: The primary outcome of INVICTUS trial.

**Conclusion:** INVICTUS trial support the current clinical practice use of warfarin as the anticoagulant for patients with atrial fibrillation and moderate to severe rheumatic mitral valve stenosis.

**EARLY-AF TRIAL:**

Progression of Atrial Fibrillation after Cryoablation or Drug Therapy. A randomized controlled trial of 303 patients with untreated paroxysmal atrial fibrillation randomly assigned to undergo rhythm control policy with antiarrhythmic medication vs. Cryoablation. Primary outcomes include first episode of persistent atrial fibrillation, recurrent atrial tachyarrhythmia, atrial fibrillation burden, quality of life metrics and safety.

	Ablation group	Antiarrhythmic group
Persistent atrial fibrillation)	1.9%	7.4%
Recurrent Atrial tachyarrhythmia	56.5%	77.2%
Hospitalization	5.2%	16.8%
Serious adverse events	4.5%	10.1%

**Conclusion:** Catheter ablation was beneficial as initial treatment of patient paroxysmal atrial fibrillation with similar safety profile in comparison to antiarrhythmic medication.

**Diuretic Comparison Project - DCP Trial:**

Randomized controlled trial of 13523 patients with hypertension, aged > 65 and 97% were males. The primary outcome was major adverse cardiovascular outcome (MACE) of Chlorthalidone vs. hydrochlorothiazide (HCTZ) at 5-year follow up.

**Conclusion:** The study showed that among elderly with hypertension both Chlorthalidone and HCTZ had similar cardiovascular outcomes.

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# Few examples

## of Libyan Hospitals / Private Clinics Data

The data from some hospitals in western parts of Libya which provide invasive and non invasive cardiology services collected as following:

Data of the cardiology department of Tripoli University Hospital (Oct. 2021 to Nov. 2022)

Procedure	Coronary angiography	PCI	Devices	Total
#	677	116	67	860

Data of the cardiology department of Misurata Medical Centre (Oct. 2021 to Nov. 2022):

Procedure	Coronary angiography	PCI	PPM	ICD	CRT	Total
#	257	144	2	3	8	414

Data of the National Cardiology Centre Tajura ( May 2021 to Nov. 2022):

Procedure	Coronary angiography	PCI	Devices	Total
#	720	Elective 520 Primary 20	253	1520

.Data of the Cardiology Department Meitiga Hospital (Aug. 2022 to Dec). 2022

Procedure	Coronary angiography	PCI	Devices	Total
#	320	Elective 165 Primary 105	15	608

Dr. Osama Abuzuagaia; MD  
Arab board internal medicine  
Lecturer, Misurata University  
Specialist, Misurata Cardiac Centre, Libya

# Few examples

## of Libyan Hospitals / Private Clinics Data

The data from some hospitals in eastern parts of Libya which provide invasive and non invasive cardiology services collected as following:

Procedure	Tobruk medical center	Private Clinic	Private Clinic
Diagnostic angio	223		1070
PCI	80		330
PPM			22
ICD			1
Open heart		47	

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Lecturer, Faculty of Medicine, Benghazi University

## Previous events and activities of the LCS members:

### The 8th LCS Congress – Tripoli Libya July, 2022:

The LCS hosted the 8th Annual Scientific Congress in Tripoli, Libya at Rixos Convention Center, July 1-3, 2022. The 8th LCS Congress was the one of the biggest scientific meetings in Libya in 2022 with more than 400 people attended. In addition to a robust scientific program, two courses on BLS/ACLS, Cardiac cath and transesophageal echocardiography course were taken place and 7 workshops were done during the congress. There were 45 invited speakers given more than 60 presentations, 50 posters & oral presentations. The best 5 posters received the young investigator awards & all presented abstracts published at Ibnosina Journal for Medicine & Biomedical Sciences.



In addition to the scientific benefit and the intense attendance, the eighth conference of the Libyan Heart Association was distinguished by the provision of training points. The Continuing Medical Training Program is a globally recognized continuing medical training program for the first time in Libya from the European Commission for accreditation by land a pioneering step that will raise the efficiency of medical staff.



The success of the conference was also by providing valuable scientific material that was well received by the audience and intense attendance, more than 400 people including specialists, consultants, nurses, health technicians, pharmacists, medical students and general practitioners from all cities of Libya, with the effective participation of Libyan experiences from inside and outside the country, and the presence of honorary guests from neighbor countries.



Moreover to the robust scientific program, we invited local & national societies to participate in the meeting joint sessions & organized 9 workshops training more than 200 physicians & nurses. In unprecedented achievement, the 8th LCS Congress offered for the first-time continuous medical education (CME) points in Libya accredited by the European Board for Accreditation in Cardiology (EBAC) a body affiliated with the European Cardiac Society, which requires high standards of scientific material. The meeting was concluded by issuing final recommendations to the healthcare authorities in Libya, which was published in the Libyan International Medical University Journal.

## The recommendations of the Libyan Cardiac Society (LCS) eighth conference included the following:

1. It is well-established that cardiovascular disease is the most common cause of morbidity and mortality worldwide and in Libya with significant burden on the healthcare system. Therefore, we recommend that cardiovascular disease should be given high priority by the healthcare authority and to collaborate with the LCS to establish short- and long-term management strategies, launch national registry for cardiovascular disease and allocate resources and expertise for programs that aim to prevent, early diagnose and treat cardiovascular disease by providing essential cardiac services and training to primary care centers as well as continuous support to tertiary cardiac centers across the nation.
2. Launch national initiative called "Stent of Life" for patients with acute heart attack in which patients with ST-elevation myocardial infarction have access to primary percutaneous coronary intervention within the first few hours of the diagnosis. The society urges the healthcare authority to give this recommendation the utmost importance due to its significant impact on saving lives.
3. Establish specialized cardiac centers for diagnosis and management of rare and complicated heart diseases such as congenital heart disease, both in children and adults and complex cardiac arrhythmia. In addition, it is also important to provide the necessary training and support to the healthcare personal in these specialties
4. Launch the society's acute myocardial infarction registry initiative in collaboration with the National Center for Disease Control and World Health Organization office in Libya. We believe that the registry should provide accurate data on the extent of acute myocardial infraction in the nation, current practices, and disease outcome across healthcare centers in Libya. The registry should also serve as a quality improvement tool and reliable resource to healthcare management policies.
5. Support the National Center for Health System Reform program to improve the healthcare system in Libya and to use the society expertise in selecting the cardiac services needed for each level of care, primary, secondary and tertiary centers in this proposed program.
6. Urge the healthcare and higher education institutions to support the Continuous Medical Education (CME) programs to improve the quality of the healthcare professionals by encouraging them to use the available funds for improvement and development for reliable learning resources that support CME credits. We also recommend and willing to collaborate to establish national CME accreditation program.
7. The society' members expressed their interest to collaborate with healthcare authorities in all cities of Libya to organize various scientific and educational activities such as seminars, workshops, training courses and prepare national guidelines documents in the area our expertise to improve the quality of healthcare professionals and raise public awareness about cardiovascular disease in Libya.
8. Invite the Libyan experts abroad to participate in local scientific activities similar to the LCS 8th Congress and visiting professor program to build collaborative relationship among cardiologists and cardiac surgeons inside and outside Libya and to recruit them for providing cardiac services in Libya. The society membership database can be useful to provide an accurate list of Libyan cardiologists, cardiac surgeons, and cardiac anesthesiologists abroad who are interested to participate in such initiatives.
9. Recognize the LCS as house of expertise in the Ministry of Health and Ministry of Higher Education for direct communication and provide professional consultation on matters related to the field of cardiovascular disease in which the society offers unparalleled local expertise and experience over two decades in this field with more than 600 members across Libya and abroad.
10. Designate offices for the LCS and other active medical societies listed in the Libyan Authority for Scientific Research to be able to work efficiently and achieve their goals to improve quality of healthcare professionals and raise public awareness.
11. Provide standard mechanisms and open channel of communications between the Libyan Authority for Scientific Research and Ministry of Health Office for local and international exhibitions and conferences and other supportive institutions to raise funding and provide logistical support for the society annual scientific meeting.
12. The 9th LCS Congress will be held in the city of Benghazi in December 2023.

## World Heart Day (Sept. 29, 2022):

The Libyan Cardiac Society celebrated the World Heart Day on September 29th, 2022 in many cities across Libya, there was a wide participations and activities of LCS members and volunteers allover Libya. There were educational and scientific lectures, marathon, competitions, health fair screening for hypertension, dyslipidemia and diabetes were held. This is considered the largest public awareness campaign about heart disease in in Libya.



The World Heart Day celebration was a major public awareness event. In collaboration with the National Center for Disease Control, the society prevention working group has celebrated the world heart day in 17 cities across the country under the logo **"Use Heart for Every Heart"**



## Other LCS activities:

In July, we collaborated with Misurata Heart & Cardiovascular Center organizing one-week intensive hands-on transthoracic echocardiography training program focused on the basics of echocardiography.

In August, the society was invited to give 3-day course on the essential skills for nursing at Al-Wahda Hospital in Darna. In mid-October, the society has had a significant contribution & presence at the 7th Libyan Medical Science Conference via live presentations, symposium & workshops training almost 100 physicians.

On October 29th, the society collaborated with the Albida Medical Center in organizing scientific day entitled Cardiology for Non-Cardiologists, which was well attended & received.

## Libyan Cardiac Society (LCS) Membership request form

**Name in English:** .....

**Current place of work: Hospital:** .....

**Work Phone:** .....

**Work mail box:** .....

**Residence Address:** .....

**E-mail:** .....

**Mail box:** .....

**University academic qualification:**  
.....  
.....  
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**Place and date of obtaining:**  
.....  
.....  
.....

**Signature:** .....

**Date:** .....

## Important Dates & Events:

The following are some of the important dates that the LCS always participates in reviving and raising awareness about, Such as World Heart Day, World No Tobacco Day, and World Blood Pressure Measurement Day.

**FEBRUARY 14<sup>th</sup>**

World Congenital Heart Disease Awareness

**APRIL 7<sup>th</sup>**

World Health Day

**MAY 7<sup>th</sup>**

Blood pressure measurement campaign

**MAY 31<sup>th</sup>**

World no smoking Day

**September 29<sup>th</sup>**

World Heart Day

**December 2023**

The 9th LCS Congress

With greetings from the LCS president and executive board members, also best greeting of the LCS and the editor-in-chief of the LCS newsletter and its editorial board members..



*You can contact us and we are happy to receive your feedback via the LCS e-mail and follow us on social media platforms online*



## Pictures from Libya:

**Leptis Magna**



**Theater of Sabratha**



**The Acacus Mountains**



**Archaeological Site of Cyrene**

