FROM THE HEART

St Charles County
Mended Hearts
Newsletter
Chapter 369
www.MendedHeartsStCharles.org

Issue No.39 **Spring 2020 Newsletter –April, May, June.**

Welcome to Mended Hearts, Chapter 369! This chapter became official on August 10th 2010. Mended Hearts began in 1951 in Boston and has been providing support to heart patients and their families for 66 years with the theme that there is life with heart disease. There are over 230 chapters nationwide.

President – Larry Mantle
Vice President – Vacant
Treasurer - Charlotte Mantle
Secretary – Marla Fix
Visiting Chairperson – Neal Fix
Facilitators - Susan Dreckshage RN (BJC), RN (SSM)
Newsletter Editor –Bill Fix
Membership – Neal and Marla Fix

Contact Information

Interested in finding out more information about Chapter 369? Contact Neal Fix @ 636-947-8730.

Message to Recent Heart Patients

We hope you received some comfort and encouragement from our Mended Hearts visitors during your hospital stay. As you become active again, we invite you, your family and friends to attend our meeting as guests. We invite speakers that should interest heart patients and their families. We hope that you will become a member of our organization. Then you, too, can join in sharing the real meaning of our motto. "It's great to be alive"- and to help others.

Spring Birthdays

Bill Fix 5/31**,**

Spring Heart Event Anniversaries

Bill Fix 5/2012**,** Bill Vehige 4/10,

Please consider becoming a visitor it is a rewarding experience, patients are encouraged by your success in overcoming heart disease.

Upcoming Meetings

Mended Hearts Chapter 369 meets on the second Tuesday of the month alternating between BJC St. Peters and SSM St. Joseph's in St. Charles. Join us for a light meal before the meeting

Meetings at St Josephs will be at 5:00 pm. All other meetings will be at 6:30 pm.

The upcoming meetings are tentative depending on the restrictions in place because of the Covid 19 virus:

April 14 Cancelled due to Covid-19 concerns.

May 12th @: Barnes-Jewish St Peters in the medical building #6 Jungermann Circle. We meet in the Conference room. Subject: Cardio Vascular System. We will Email if cancelled.

June 9th. St. Joseph's St. Charles. In the Doctors Dining Room on the ground floor. Subject: TBT

What Genes Can Tell Us About Heart Disease

There is tremendous interest in learning what our genes can tell us about ourselves. Wouldn't you like to know if you have an irregular gene ("gene variant") that causes sky-high cholesterol or makes your blood clot easier before it could be detected with a standard blood test? Wouldn't it be helpful to know if you are at risk for a future heart attack at a young age, so you could start treatment to prevent it?

There is a great deal of excitement over the promise of genomic sequencing and how it might be used to create more effective treatments for an individual—in essence, to personalize care. Already, cancer doctors are beginning to use genetic information from a person's tumors to choose what they believe to be the most effective drugs. But personalized

medicine is still in its infancy and not widely used in cardiology yet. Why? Because the more we learn, the more questions we have.

Learning What Genes Have to Say

Our DNA is incredibly complex. Every one of us has three million base pairs of genes. To know which gene pairs are abnormal, we first had to learn what normal genes look like. Fortunately, dedicated geneticists were able to map the DNA with the help of powerful computers. Sophisticated machines can read these complex codes very quickly—and the process that took 13 years to complete can now be done in a day or so.

Next, these scientists began looking for irregular genes that appeared in people with certain diseases, so they could make a connection between the mutation and the condition. This is like finding typos in the pages of a book—everyone has several typos in their DNA.

But we've learned the connection is not always straightforward. For example, we found several gene variants that lead to hypertrophic cardiomyopathy, a disease that causes the heart muscle to thicken, enlarge, and ultimately fail. For a long time, we have known that not everyone who carries this gene variant develops the disease. This applies to other gene variants, as well.

Furthermore, scientists recently found out that a gene variant in hypertrophic cardiomyopathy may affect some races, but not others. For example, Caucasian people who have a gene variant may develop a disease, while black people with the same gene variant may not. We don't know exactly why. So, the presence of a gene variant in some people may have a different implication in others—which means other factors may be at play.

In addition, there are plenty of diseases that appear to have a genetic cause, because they run in families, but we haven't been able to identify the gene variants that cause them. It is likely that multiple gene variants are involved.

Making Progress

From a heart standpoint, we have learned the most from rare mutations. These discoveries have led to a better understanding of how nature can correct these problems. There is a lot of hope that we can use this insight to develop new drugs to treat these diseases.

For example, a gene variant was identified a decade ago as being associated with the liver's inability to clear cholesterol from the bloodstream. People with this mutation have very high blood cholesterol levels. This discovery was used to create a new class of cholesterol medications, called PCSK9 inhibitors, which help patients with the mutation metabolize cholesterol. The medication stops a protein called PCSK9 from interfering with the normal cholesterol clearance mechanism in the liver. It took less than a decade from the discovery of the PCSK9 pathway to the production of a drug that could be used in patients. This would not have been possible without knowledge of the genetic code.

Genetic studies are bringing us closer to finding a treatment for hypertrophic cardiomyopathy, as well. An innovative treatment using small molecules to target where the gene variant is located has been developed. When cats that are prone to this disease are given this agent, the chance they will develop an enlarged heart drops.

The next step is to test the formula on humans at risk for the disease. If the treatment is effective, it will be a breakthrough in preventing hypertrophic cardiomyopathy. No treatment is currently available for those who have a higher likelihood of developing this disease because they carry the gene variant. Developments like these are very exciting as they change our approach to patient care from reactive to proactive.

What We Don't Know

As we come closer to understanding the relationship between gene mutations and diseases, a third factor arises to complicate matters—how our genes interact with the environment and our daily life. Gathering this knowledge will take a systematic approach to clinical studies and many decades to arrive at answers.

Eventually, however, we hope they will help us understand some basic questions, such as why some people who either smoke, breathe polluted air, or eat poor diets develop heart disease while others don't. The good news is that recent studies also suggest that healthy habits, like exercising regularly and eating a healthy diet, may overcome the risks of developing cardiovascular diseases that are "inherited" through gene variants.

Filling in the Blanks

There are a lot of missing pieces of the DNA puzzle. Fortunately, several huge efforts are underway to collect and analyze genomic data. The ultimate goal is to give doctors the knowledge they need to treat patients who present with a certain disease.

One effort is called the Precision Medicine Initiative, or "All of Us". It is a unique project aimed at identifying individual differences in genes, environment, and lifestyle. The project will enroll one million or more participants nationwide who

agree to share biological samples, genetic data, and diet and lifestyle information with researchers through their electronic medical records. It is hoped that the information gathered through this program will result in more precise treatments for many diseases.

Cheaper Testing

The cost of DNA sequencing has dropped from thousands of dollars to hundreds of dollars—and continues to decrease. As the lower prices make DNA testing accessible for the average person, we are likely to see more direct-to-consumer marketing that will allow families to identify some genetic disease risks, similar to how you can already use DNA testing to discover your ancestry. We are still learning the implications of how obtaining information on disease risk may impact people's health and wellbeing.

In the medical world, we are trying to figure out how to use DNA testing to obtain information that we can't get through other types of testing. Once we acquire the information, we need to know what to do with it. A good example is familial hypercholesterolemia. DNA testing has revealed that three percent of people are at an increased risk for this condition that causes dangerously high blood cholesterol levels. So:

- Should everyone be tested to find this three percent?
- Is this better than using a standard blood cholesterol test and taking careful family history?
- What if a DNA test finds you have a five percent higher risk of different form of heart disease?
- Is this increased risk high enough that you should be treated?

Questions like these need to be answered before we can use DNA testing to justify our treatment approach.

Moving Forward

We have just begun to scratch the surface, but we anticipate that genetics will eventually change how cardiologists evaluate patients and their families with certain forms of heart disease, such as heart failure. One in every five adults develops heart failure. And the disease affects the children of one in every four heart failure patients. We'd like to identify these people before they develop heart failure.

Thankfully, many exciting new developments in knowledge and technology are enabling us to tackle this enormously complicated puzzle. Identifying the potential of gene testing is a daunting task, but an exciting one. Everyone is looking forward to seeing progress.

Dr. Tang is a cardiologist at Cleveland Clinic's Heart and Vascular Institute, the nation's No. 1 cardiology and heart surgery program as ranked by U.S. News & World Report. He is also Director of the Center for Clinical Genomics.

Medical Humor

was caring for a woman and asked, "So how's your breakfast this morning?" "It's very good, except for the Kentucky Jelly. I can't seem to get used to the taste," the patient replied. I then asked to see the jelly and the woman produced a foil packet labeled "KY Jelly."

A group of physicians are duck hunting. The general surgeon spots a duck flying from the marsh, aims his rifle, shoots the duck in one shot, and turns to the others and says "I just shot myself a duck."

The intern sees a duck, aims his rifle, leads the duck with his first shot, trails it with his next shot and hits with his third. He turns to the group and says, "It was too small for a condor, too big for a sparrow. I think that it was probably a duck."

The radiologist sees a duck, aims a shotgun, hits the duck, and turns to the group. He states "I just hit a flying animal. It may be a duck, pheasant, or quail. Possible flying squirrel. Cannot exclude a pterodactyl at this point. I think I should shoot it again, but with a scoped rifle next time."

The emergency physician spots a duck flying the marsh and aims a huge, automatic combat shotgun, unloading two full magazines into the air, as the other physicians take cover behind him. After the tremendous noise ceases, the intern uncovers his ears and shouts, "What the hell was that?" The emergency physicians turns around and says, "I have no idea, but I'm pretty sure that I hit it."

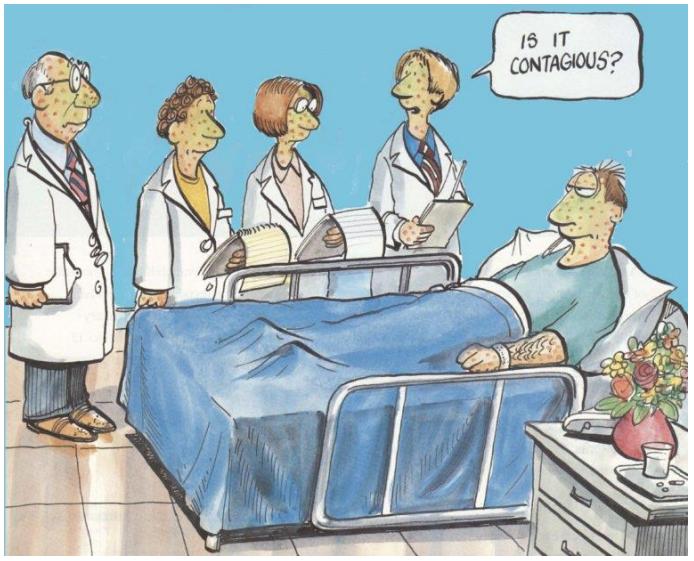
A proctologist had been in practice for 20 years and had settled into a very comfortable life with his future very secure. So he decided to fulfill his REAL dream and become an auto mechanic.

Having entered mechanic school, the former physician received the results of his first test back with a score of 200%. Confused, he asked the teacher why his score was so high.

"Well", said the teacher, "The first part was taking the engine apart and you did that perfectly, so you got 50%. The second was to put it back together

again and you did it perfectly and got another 50%. The other 100% was for doing it through the tailpipe." his is a collection of funny one-liners, exactly as typed by medical secretaries:

Patient has left her white blood cells at another hospital.
Patient has chest pain if she lies on her left side for over a year.
On the second day the knee was better and on the third day it disappeared.
The patient has been depressed since she began seeing me in 1993.
Discharge status: Alive, but without my permission.
Patient had waffles for breakfast and anorexia for lunch.
While in ER, Eva was examined, X-rated and sent home.
Skin: somewhat pale, but present.
Patient has two teenage children, but no other abnormalities.
The patient was in his usual state of good health until his airplane ran out of fuel and crashed.
Mrs. Evans slipped on the ice and apparently her legs went in separate directions in early December.
Patient was seen in consultation by Dr. Jones, who felt we should sit on the abdomen and I agree.
The patient refused autopsy.
The patient has no previous history of suicides.
She is numb from her toes down.
She stated that she had been constipated for most of her life until she got a divorce.
Both breasts are equal and reactive to light and accommodation.
Examination of genitalia has revealed that he is circus sized.
Patient was found in bed with her power mower.
She has no rigors or shaking chills, but her husband states she was hot in bed last night.



"We have a great healthcare plan. Well worth selling the house to pay for."

Mended Hearts Prayer

We ask for your blessing, Lord,
we ask for strength
that we may pass it on to others…
We ask for faith
that we may give hope to others…
We ask for health
that we may encourage others…
We ask, Lord, for wisdom
that we may use all your gifts well.
Amen.