

Project 1: Cardiovascular Surgery

AAR Registry Notes

First successful heart surgery was performed on James Cornish which was on July 9th, 1893 by Daniel Hale Williams III. He was a black surgeon at Provident Hospital in Chicago, Illinois at the time.

Cardiovascular Surgery can be called an invasive procedure.

Blackpost

Daniel Hale Williams III was born in Hollidaysburg, Pennsylvania on January 18th, 1856. His parents were Susan Price William and Daniel Hale Williams II. He was in Wisconsin in 1878 where he was working at a Medical office and got introduced to Henry Palmer who is a top surgeon which made him want to become a surgeon so in 1880 he went to Chicago Medical College and got his Doctor of Medicine in 3 years. He was the cofounder of Provident Hospital and Training Association which was the first black controlled hospital in the nation. They also at the time had an 87% recovery rate at Provident Hospital.

1893 James Cornish surgery

He had come into Provident Hospital with multiple stab wounds in his chest Dr. Daniel Williams did the surgery with limited surgical equipment and medicine. He opened the chest cavity and operated without him dying on the table or dying from infection. Cornish recovered in 51 days and ended up living 50 more years after that.

Today I Found out

James had a perforated lining around the heart, and also a pierced blood vessel and at this time in the medical field he would have been considered sitting on his deathbed. But Dr.

Williams stopped the bleed and then sewed him up and this is considered the second most successful pericardium surgery.

The first successful heart surgery was done on September 6th, 1891 by Dr. Henry Dalton. Then in 1896 the first successful cardiovascular surgery that was done on the heart itself was done in Germany by Dr. Ludwig Rehn and this was a stab wound. In 1895 was unsuccessful surgery done by Dr. Axel Cappelen and his patient died from an infection after the surgery to fix a stab wound that was in the coronary artery.

Chicago Tribune

The surgery done by Dr. Williams on July 9th, 1893 involved him going into what most people call no man's land because it was performed with no x-rays, antibiotics, adequate anesthesia, or any other modern surgical tools. He had to go through nerves, muscles, ribs, and blood vessels till he found the heart which had a one inch gash in the pericardium or the outer lining of the heart and also a nick to the heart and he had to fix the damaged sac by closing. At the time Cornish had a heart rate of 130 beats per a minute. Dr. Williams used a catgut to close Cornish up because it helped with less chance of getting an infection and dying.

Coronary Artery Disease

Symptoms: Chest pain (angina), shortness breath, heart attack

Causes: Smoking, High blood pressure, high cholesterol, diabetes or insulin resistance, sedentary lifestyles.

Risk Factors: Being older because you can have narrowed or damaged arteries, Being a man expect woman's chance increases after menopause, smoking, high blood pressure, high blood cholesterol levels, diabetes, overweight or obesity, physical inactivity, high stress.

Other possible risk factors might be are things like sleep apnea, high sensitivity c-reactive or high hs-CRP levels, high triglycerides especially for women, homocysteine.

Complications: Chest pain, heart attack, heart failure, abnormal heart rhythm.

High Blood pressure

No real symptoms to tell if you have it.

There are two types of high blood pressure one is primary hypertension which is normally found in adults and then secondary hypertension it is an underlying condition.

Primary is developed overtime

Secondary is developed because it appears quickly or all of a sudden and it often causes high blood pressure than primary. Conditions or medicine that can cause it our sleep apnea, kidney problems, adrenal gland tumors, thyroid problems, defects in blood vessels, medicines like birth control or cold remedies and decongestants and over the counter pain relievers, illegal drugs, or alcohol abuse.

Risk Factors: Men 45 and above and women 65 and above, race more common in blacks like strokes and heart attacks are, family history, being overweight or obese, not being physically active, using tobacco, too much sodium, too little potassium, too little vitamin D, drinking too much alcohol, stress, chronic conditions.

Complications: heart attack, aneurysm, heart failure, weakened and narrowed blood vessel in your kidneys, thickened and narrow or even torn blood vessels in the eyes, metabolic, trouble with memory or understanding.

Cardiac Arrest

Symptoms: Sudden collapse, no pulse, no breathing, loss of consciousness.

Causes: irregular rhythm, irregular blood flow, most common cause was erratic electrical impulses that cause the ventricles quiver uselessly instead of actually pumping blood.

This can lead to certain heart conditions like coronary artery disease, more heart attacks, enlarged heart (cardiomyopathy), valvular heart disease, congenital heart disease, electrical problems in the heart.

Risk Factors: family history of coronary heart disease, smoking, high blood pressure, high blood cholesterol, obesity, diabetes, sedentary lifestyle, drink too much alcohol, previous cardiac arrest or family history, previous heart attack, other forms of heart disease in family history, it increases with age, Men are 2 to 3 more times to experience a sudden cardiac arrest, illegal drugs, nutritional imbalance like low magnesium or potassium.

Heart Failure

Symptoms: Shortness of breath when doing actives or just when you're lying down, fatigue and weakness, swelling in legs and feet, rapid or irregular heartbeat, reduced ability to exercise, persistent cough or wheezing, increased need to urinate at night, swelling in your

abdomen, sudden weight gain, lack of appetite and nausea, difficult time concentrating or decreased alertness, chest pain.

Heart disease Gale Database

They say about 90% of American consume more salt than recommended limit which is 2300 milligrams and adults in America consume about 3400 milligrams. FDA is trying to slow down the consumption of sodium intake. We Americans get 75% from baked and processed food. The National Institute of Medicine is trying to lower sodium in Americans diets by 40% to save at the least 500,000 lives also this would mean reducing healthcare cost by about \$100 billion.

Centers for Disease Control prevention

1. 610,000 to 630,000 people or about 1 in every 4 deaths are from heart disease each year in the United States.
2. This is the leading cause to death in both men and women in the United States.
3. Most common type of Heart Disease is Coronary heart disease and it kills over 370,000 people a year.
4. About 735,000 Americans have a heart attack each year.
5. 525,000 are first time heart attacks
6. 210,000 are people that have had a heart attack before.
7. Deaths that happen due to Heart disease broken down by race and ethnicity from 2008.
American Indians or Alaska Natives 18.4% are due to heart disease, Asians or Pacific

Islanders 22.2% are due to heart disease, Non-hispanic Blacks 23.8% due to heart disease, Non-hispanic whites 23.8% due to heart disease. This is males and females and just the percent in the United States of America.

8. It is also very important to know warning signs of a heart attack like most first responders say that 92% recognized having chest pains but only 27% knew the major warning signs of a person having a heart attack and made the call to 9-11.
9. 47% of Cardiac deaths occur outside the hospital because most people with heart disease don't actually know the early warning signs of a heart attack.
10. Major warning signs are chest pain or discomfort, shortness of breath, upper body pain like in arms, neck jaw, back, and nausea, lightheadedness or cold sweats.
11. About 47% of Americans have one of three major risk factors like high blood pressure, high cholesterol, or smoke. Some minor risk factors are being overweight, diabetes, poor diet, physically inactive, and excessive use of alcohol.
12. Someone has a heart attack every 40 seconds.
13. Between 70% and 80% sudden cardiac events occur in men and half of the men that die from a cardiac event have had no previous symptoms.
14. 8.5% of white men have heart disease, 7.9% of black men, 6.3% of Mexican Americans
15. While 2/3 of women don't experience any previous symptoms before having a heart attack.
16. 5.8% white women have heart disease, 7.6% black women, 5.6% Mexican Americans
17. 54% of women recognize that the leading cause to death is heart disease
18. Heart disease killed 289,758 females in 2013

19. 5.7 million people have heart failure in the United States which is about 1 out of 9 deaths are due to heart failure
20. About half of the people diagnosed with heart failure die within five years after being diagnosed.
21. Heart failures each year in total cost \$30.7 Billion
22. It can't be cured in it can only be treated by things like medicines and reducing sodium and doing daily physical activity.
23. Heart attack is when the blood flow or supply is cut off to your heart.
24. 15% people who have a heart attack die

Smoking is the lead cause to preventable diseases in America. But 1 out of 5 deaths in the United States are due to people smoking which is then 480,000 deaths each year to smoking. The rate of smoking has went down though from 21 out of 100 adults to 15 out 100 adults. Smoking is majorly affecting low education, males, young adults, south and midwest areas more, people below poverty level, disabled and certain race and ethnic groups. 16.7% for about how many adult Americans smoke and 13.6% of adult women smoke in America.

https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm

75 million people in the United States have high blood pressure which 29% and that is 1 out of every 3 American adults.

<https://www.cdc.gov/bloodpressure/faqs.htm>

73.5 million adults in America have high cholesterol which is 31.7%. 1 out of every 3 and less than half about 48.1% are getting treated for high cholesterol to lower their levels. People are

twice the risk to getting a form of heart disease. 31 million Adults in America have a cholesterol level high than 240mg/dl.

<https://www.cdc.gov/cholesterol/facts.htm>

78 million Americans Overweight or obese.

30% of children in America are obese or overweight.

60% of women America are obese or overweight

13% of people in world are obese and overweight is from the United States but we alone account for 5% of the world's population

3/4 of men are overweight or obese in America.

The countries that have the most obese and overweight and account for 50% of this is US, China, India, Russia, Brazil, Mexico, Egypt, Germany, Pakistan, and Indonesia.

3.4 million deaths globally in 2010 were caused by obesity or overweight which lead to thing that killed them.

<http://www.diabetes.org/diabetes-basics/statistics/?referrer=https://www.google.com/>

Diabetes 30.3 million live with diabetes