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A Review on Cardiac Arrest



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ABSTRACT

In this review paper, a detailed mechanism of sudden cardiac arrest is stated. Cardiac arrest can occur suddenly and progressively during exercise, eating, walking, swimming, etc. The reviews prehospital records of consecutive out-of-hospital cardiac arrest in the provincial BC OHCA registry from June 17-2017 to August 18-2018. It is proof that patients. To disclose coronary artery disease (CAD). In young patients is difficult to electrocardiogram screening but using FCG is easy. Cardiac arrest commonly more than 1 million cases per year in India. Mostly cardiac arrest is also called cardiovascular disease. A review paper states the treatment of cardiac arrest. In cardiac arrest, there are three phases. In cardiac arrest, CPR is the most important treatment on it. This paper's detailed study of cardiac arrest means what is cardiac arrest? What is treatment on cardiac arrest and in these proof and also detail information about cardiac arrest and heart attack? Cardiac arrest is triggered by an electrical malfunction in the heart that causes irregular heartbeats. It is also called Arrhythmia.



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INTRODUCTION:

In India there are 1 million per year cases are suffering from cardiac arrest. Cardiac arrest means loss of heart functions, difficulties in breathing and consciousness. The condition usually results from a problem with our heart's electrical system cardiac arrest is also called cardiopulmonary arrest or circulatory arrest.

When patients suffer from cardiac arrest it causes death it also called sudden cardiac death.

The initial description of SCD in history was made as early as the 4th century BC. By the first physician and legendary founder of Modern medicine **Hippocrates**.

Cardiac arrest is a sudden loss of blood flow resulting from the failure of the heart to pump effectively. It includes loss of consciousness and abnormal or absent breathing.

Some individuals may experience chest pain, shortness of breath, or nausea immediately before entering cardiac arrest. Radiating pain to one arm is a common symptom.

It usually results in death if not addressed within minutes.

Cardiac arrest:-

Other names: - cardiopulmonary arrest, circulatory arrest, sudden cardiac arrest sudden cardiac death. The most common cause of cardiac arrest is coronary artery disease, less common causes include major blood loss, oxygen deficiency, potassium deficiency, heart failure, and strenuous physical activity a cardiac arrest can occur as a result of a heart attack or heart failure. These are the knot same.

Prevention includes not sometimes physical activity and maintaining a healthy weight. The treatment for cardiac arrest includes immediate cardiopulmonary Resuscitation (CPR) and if a checkable rhythm is a present defibrillation. In the United States, approximately 535000 causes occur a year about 13 per 10000 people (326000 or 61%) experience cardiac arrest outside of a hospital setting while 209000 (39%) occur within a hospital cardiac arrest becomes more in commonage.

It affects males more often than females via its tendency to cause atrial fibrillation alcohol use tends to cause generalized heart problems as well.

The % of people who survive out of hospital cardiac arrest with treatment by emergency medical services is about 8%.

Sudden cardiac arrest (SCA) is a condition in which the heart suddenly stops breathing. When this happens blood stops flowing to the brain and other vital organs. It is not treated SCA usually causes death within minutes. But quick treatment with defibrillators May is life-saving. In this paper, there is a difference between a heart attack and cardiac arrest. A heart attack occurs when the blood supply to parts of the heart stops and thus causes a section of the heart muscle to begin to die. Whereas cardiac arrest occurs when the hearts stop breathing as a whole.

How is sudden cardiac arrest (SCA) different from a heart attack?

A heart attack is different from an SCA. A heart attack happens when blood flow to the heart is blocked. During a heart attack, the heart usually doesn't suddenly stop breathing with an SCA. The heart stops beating. sometimes an SCA can happen after or during recovery from a heart attack.

What causes sudden cardiac arrest (SCA)?

Our heart has an electrical system that controls the rate and rhythm of our heartbeats. An SCA can happen when the heart's electrical system is not working properly and causes irregular heartbeats.

Irregular heartbeats are called **Arrhythmia**.

They are different types. They may cause to heart to beat too fast and too slow or with an irregular rhythm. Some can cause the heart can stop pumping blood to the body. This is the type that causes SCA.

Mechanism: The mechanism responsible for the majority of sudden cardiac death is called ventricular fibrillation.

Structural changes in the disease heart as a result of inherited factors (mutation ion channel, coding gene for example) cannot explain the suddenness of SCD. Also, sudden cardiac death could be a consequence of electrical mechanical disjunction and bradyarrhythmias.

Cardiac arrest is the cessation of cardiac mechanical activity resulting in the absence of circulatory blood flow sudden cardiac arrest occurs outside the hospital in more than 350,000 people per year in the US with as 90 % mortality. Ventricular Arrhythmia is the leading cause of sudden cardiac death deranged cardiac metabolism and abnormal redox state during cardiac disease formant arrhythmogenic substrate through direct or indirect modulation of a cardiac ion channel or transporter functions.

Respiratory arrest and cardiac arrest are different, but without treatment one inevitably leads to the other.

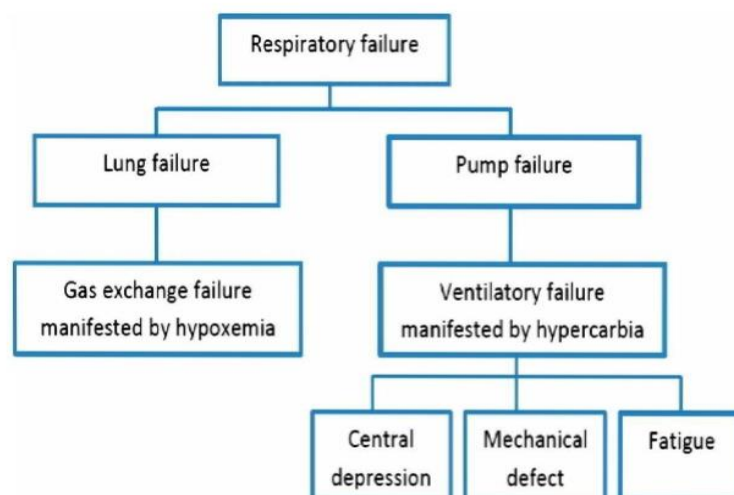
See also, respiratory failure, Dyspnea, hypoxia.

Etiology of cardiac arrest:

In infants and children:-

Cardiac causes sudden cardiac arrest less common than adults the predominant cause of sudden cardiac arrest in infants and children is respiratory failure due to various respiratory Disorders.

Eg. Airway, infection, obstruction, smokes inhalation, etc.



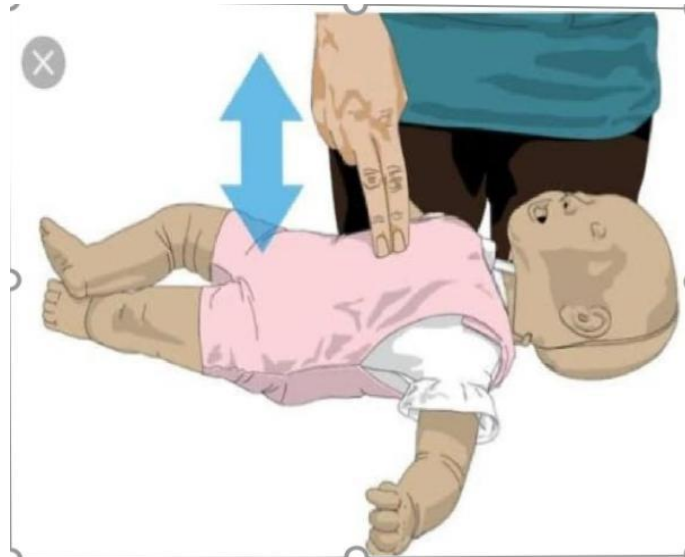


Fig 1. CPR Treatment in Children

In Adults:

only sudden cardiac arrest primarily from cardiac disease types but specifically coronary artery disease. The earliest sign of heart illness is sudden cardiac arrest. Other causes include circulatory shock due to noncardiac disorder, especially pulmonary embolism. Gastrointestinal hemorrhage or trauma.

Signs and symptoms of cardiac arrest:-

Chest discomfort, shortness of breath, weakness. In critically or terminally ill patients, cardiac arrest is often preceded by a period of clinical deterioration with rapid, shallow breathing, arterial hypotension, and a progressive decrease in mental alertness

- Pain areas = in the chest
- Whole body= collapse, fainting, or light headiness also common pulseless, shortness of breath.

Diagnosis of cardiac arrest:-

- Clinical evaluation
- Cardiac monitor and electrocardiography (ECG)
- Sometimes testing for cause (e.g. electrocardiography, chest x-ray, chest ultrasonography)

Diagnosis of cardiac arrest is by clinical findings of apnea, pulseless and unconscious.

Drugs used for the treatment of cardiac Arrest:-

1. Adrenaline
2. Amiodarone
3. Lidocaine
4. Atropine
5. Additional drugs
6. Calcium chloride
7. Magnesium sulfate
8. Miscellaneous drugs

Treatment of cardiac arrest:-

CPR is the best treatment for cardiac arrest. Immediate CPR is curricula for treating sudden cardiac arrest. By ensuring that oxygen-rich blood reaches the body's important organs. CPR can act as a lifeline until more advanced emergency help arrives.

Cardiopulmonary Resuscitation is one form of emergency treatment for cardiac arrest.

CPR in 5 steps:-

1. Step 1:- shock and shout
2. Step 2:- call 999
3. Step 3:- cover mouth and nose with Cloth
4. Step 4:- Gives Chest compression
5. Step 5:- keep going

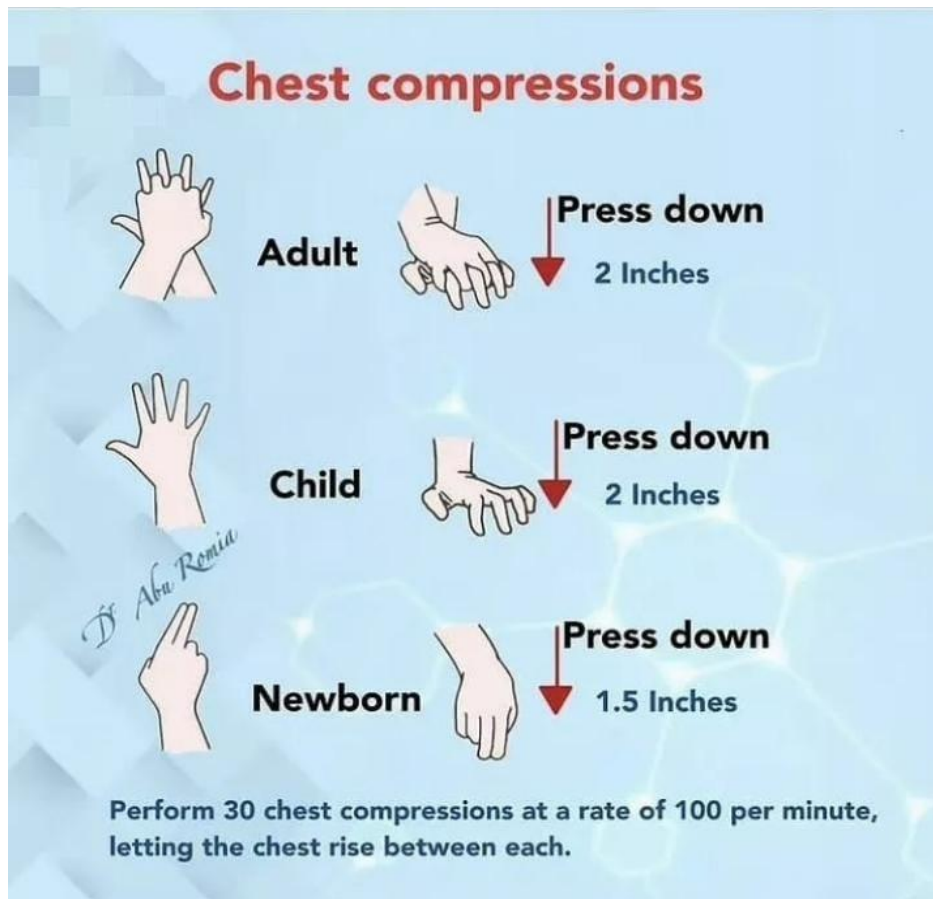


Fig 2: CPR treatment on cardiac arrest

• **Defibrillation** is another. These treatments get your heart beating again once it has stopped.

Cardiac arrest

Other names - cardiopulmonary arrest,

Circulatory arrest, sudden

Cardiac arrest, sudden cardiac death

Specialty - cardiology, emergency medicine.

Symptoms - loss of consciousness,

Abnormal or no beating.

Usual onset - older age

Cause - coronary artery disease,
Congenital heart defects,
Major blood loss
Lack of oxygen, very low

Potassium

Heart failure % (in hospitals)

Depends On strongly type and

Cause

Diagnostic - finding pulse

Method

Prevention - no smoking, physical

Activity, maintaining a healthy

Weight, eating healthy food.

Treatment - cardiopulmonary

Resuscitation (CPR) and

Defibrillation.

Prognosis - overall survival rate at 10 %

(Outside of the hospital) 25 %

(In hospitals); depends

On strongly type and cause

Frequency -13 per 10000 peoples per



Death - 425,000 per year (us).

REFERENCES

1. Available from: <https://www.adhajournals.org>
2. Available from: <https://en.m.wikipedia.org/wiki>
3. Available from: <https://simplem.wikipedia.org/wiki>.
4. Available from: <https://my.clevelandclinic.org/wiki>
5. Available from: <https://medlineplus.gov/suddencar>
6. Available from: textbook of emergency cardiovascular care and CPR
7. Available from: <https://www.heart.org/health/topic>
8. Available from: <https://radiopaedia.org/articles>
9. Available from: <https://emedicine.medscape.com>
10. Available from: <https://www.ncbi.nlm.nih.gov/books>
11. Available from: <https://www.msmanuals.com/en.in>
12. Available from: <https://journals.www.com/fulltext>
13. Available from: <https://www.longdom.org>
14. Available from: <https://www.abebooks.com/pip>
15. Available from: www.sciencedirect.com
16. Available from: www.sciencedirect.com
17. Available from: F.A pance, in encyclopedias of the neurological science second edition 2014
18. Available from: <https://www.combridge.org>
19. Available from: <https://jbu.pure.elsevier.com>
20. Norman A.paradis Henry R.Halparin Karl B..KerenVlker Wenzel and Douglass A. Chamberlain, book of cardiac arrest 2ndedition November 5, 2007.
21. Available from: <https://www.Webmd.com>
22. Available from: <https://bhf.org.uk>
23. Available from: <https://www.nhlbi.nih.gov>
24. Available from: <https://www.heartfoundation.org.niz>
25. Available from: <https://www.Healthline.com>
26. Available from: <https://www.medicalnewstoday.com>
27. Available from: <https://health.clevelandclinic.org>.
28. Available from: <https://www.cardiosmart.org>
29. Available from: <https://www.thehospitalist.org>
30. Available from: <https://jamnetwork.com>