



Clinical Aspects of Congenital Heart Defects

Dario Ewert*

Department of Congenital Heart Disease and Paediatric Cardiology, German Heart Centre Munich, Technical University Munich, Munich, Germany

DESCRIPTION

Congenital heart defect has a problem with the structure of the heart. Birth defects are the most common form of congenital deficiency. Defects can affect the walls of the heart, heart valves and arteries and veins near the heart. They can interfere with normal blood flow through the heart. Blood flow can be slowed down, flowed in the wrong direction or location, or completely blocked.

Doctors use a physical exam and special heart tests to diagnose congenital heart defects. They often find severe defects during pregnancy or soon after birth. Signs and symptoms of severe defects in newborns include Rapid breathing, Cyanosis-a bluish tint to the skin, lips, and fingernails, Fatigue, Poor blood circulation. Many congenital heart defects cause few or no signs and symptoms. They are often not diagnosed until children are older. CHD can range from mild (for example, a small hole in the heart) to severe (for example, a part of the heart that is missing or poorly formed). About one in four babies born with a heart defect has a serious CHD (also known as a serious congenital heart defect). 1 Babies with critical CHD will need surgery or other treatment within the first year of life.

There are several types of CHDs

- Atrial Septal Defect
- Atrioventricular Septal Defect
- Coarctation of the Aorta
- Double-outlet Right Ventricle
- D-Transposition of the Great Arteries
- Ebstein Anomaly
- Hypoplastic Left Heart Syndrome
- Interrupted Aortic Arch
- Pulmonary Atresia
- Single Ventricle
- Tetralogy of Fallot
- Total Anomalous Pulmonary Venous Return

- Tricuspid Atresia
- Truncus Arteriosus
- Ventricular Septal Defect

Congenital heart disease (CHD) is the most common form of birth defect. As medical care and treatment advance, babies with CHD are living longer and healthier lives. Many children with congenital heart disease do not need treatment, while others do. Treatments include drugs, catheter procedures, surgery, and heart transplants. Treatment depends on the type of defect, its severity, the age, size of the child, and general health.

Signs and symptoms

Some congenital heart disorders do not cause signs or symptoms. Some people develop signs and symptoms later in life. And symptoms can recur years after the heart defect has been treated.

Common congenital heart disease symptoms in adults include:

- Abnormal heart rhythms (arrhythmias)
- A bluish tint to the skin, lips and fingernails (cyanosis)
- Shortness of breath
- Tiring quickly upon exertion
- Swelling of body tissue or organs (edema)

Diagnosis and treatment

Some CHDs can be diagnosed during pregnancy by a special type of ultrasonography called fetal echocardiography. This ultrasonography produces an ultrasound image of the developing baby's heart. However, some CHDs are not detected after birth or until later in life, childhood or adulthood. If the healthcare provider suspects CHD, the baby may undergo several tests (such as echocardiography) to confirm the diagnosis.

Treatment of CHD depends on the type and severity of the defect present. Some affected babies and children may need more than one surgery to repair the heart and blood vessels. Some can be treated without surgery using a procedure called cardiac catheterization. A long tube, called a catheter, is passed through a blood vessel

Correspondence to: Dario Ewert, Department of Congenital Heart Disease and Paediatric Cardiology, German Heart Centre Munich, Technical University Munich, Munich, Germany, E-mail: dario.ewert@hotmail.com

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through the heart, where doctors can make measurements, take pictures, perform tests, or fix problems. Although it may not be possible to completely repair a defect in the heart, these steps can improve blood flow and the work of the heart. It is important to note that many people using CHD do not heal even after the heart defect has been repaired.

Adults with CHD need counseling to plan important life issues such as college, career, employment, insurance, activities, lifestyle, inheritance, family planning, pregnancy, chronic care, disability, and end of life. Knowledge of specific congenital heart disorders, expectations for long-term outcomes, and potential complications and risks need to be reviewed as part of a successful transition from pediatric to adult care. Parents should help convey responsibility for this knowledge and responsibility for continued care to young adult children. This will help ensure the transition to adult health care and optimize the health of young adults in CHD.

Causes

Researchers do not know what causes most types of congenital heart disease. Some congenital heart diseases are inherited (inherited) by

the family. To understand congenital heart disease, know how the heart works.

- The heart is divided into two upper chambers (atria) and two lower chambers (ventricular).
- The right side of the heart carries blood to the lungs through blood vessels (pulmonary arteries).
- Blood absorbs oxygen in the lungs and returns to the left side of the heart through the pulmonary veins.
- The left side of the heart then pumps blood from the aorta to the rest of the body.

Congenital heart disease can affect any of these heart structures, such as the arteries, valves, ventricles, and the tissue walls that separate the ventricles (septum).

Prevention

Both men and women with congenital heart disease are at increased risk of inheriting some form of congenital heart disease to their children. If there is plan to have a child, doctor may suggest genetic counseling or screening.