



Transradial Angioplasty performed successfully in a complex and rare Dextrocardia patient

A 45 year old patient with a condition of dextrocardia, a right-sided heart and reversed internal organs, situs inversus, was operated upon successfully in a complicated angioplasty and stenting via transradial approach by Dr. Suresh Suryawanshi, an interventional cardiologist at Wockhardt Hospitals.

Normally, the heart points to the left side of the chest but in Dextrocardia, the heart points towards the right of the chest and other organs are located in their normal positions. Dextrocardia is a rare congenital defect that occurs at birth with an incidence of 1 in 10,000 births. The patient in this case suffered not only from Dextrocardia but also from as Situs inversus, where the major internal organs of the body were also inverted or deviated from the normal positions to the opposite side.

Patients diagnosed with such conditions have a relatively normal life span and low morbidity. The incidence of coronary artery diseases in patients with dextrocardia is akin to the general population but when such patient has an acute heart attack, it is extremely challenging for diagnosis and treatment. In normal patients, chest pain from the heart is commonly left-sided and radiates to the left upper arm and shoulder while in dextrocardia, the chest pain is commonly right sided and may radiate to the right upper arm and shoulder. Thus, the diagnosis of acute heart attack and the amount of damage to the heart can be miscalculated or underestimated, leading to significant delay in the diagnosis and necessary treatment for these patients.

It can be challenging to perform a coronary angiography in patients with dextrocardia due to the irregular anatomical location of the heart, coronary arteries and the aorta. The challenges are in making the right choice of catheters, engagement technique, radiological orientation of anatomy and appropriate radiological angles and views in the catheterization laboratory. Potential difficulties are faces during a Coronary Angioplasty in these patients as the anatomy is unusual.

“When this patient came to us, his main heart artery showed 95% blockage. A difficult but challenging coronary angiography followed by angioplasty & stenting done via right transradial approach was successful”, said Dr. Suresh Suryawanshi. In a transradial intervention, angiographies and angioplasties are performed through the radial artery. Following the surgery, the patient remained asymptomatic and was discharged after two days under stable conditions of blood flow and circulation. In patients with dextrocardia, there are several case reports of angioplasty and stenting in the world, but very few of successful transradial angioplasty and stenting, and only 2 such cases from India have been reported so far.