BioSpectrum the business of Bio & Health Sciences

Aortic Stenosis cannot wait

12 November 2020 | Views

Data suggests that 65% of deaths due to Covid-19 had pre-existing cardiovascular complexities

The human heart is a complex organ of the human body and is responsible for the circulation of blood to other various parts of the body. One of the great arteries, aorta, is responsible for the supply of oxygenated or purified blood to the whole body. As we grow old the aortic valve narrows due to the deposition of calcium on the leaflets of the aortic valve causing various symptoms, this narrowing of the aortic valve is known as aortic stenosis.

A patient with aortic stenosis has declined cardiac output due to the narrowing of the aortic valve. The starts experiencing – Abnormal heart murmur, chest pain, fast heartbeat, fatigue, breathlessness, syncope, and eventually leads to heart failure. Heart failure is the failure of the heart to pump optimal blood for the normal function of the human body. Studies have shown that when a patient with aortic stenosis experiences symptoms, the risk of mortality or the death rate in simple terms is to the tune of 50%.

Auscultation, a method for observing heartbeat rhythm is a very important diagnostic tool to determine and diagnose aortic stenosis. Therefore, it is of utmost necessity that once a patient crosses the age of 60 years, he/she needs to get this simple test done on a routine basis. 2D echo is mandatory to identify any underlying valvular disease. The heart murmur which is observed through auscultation has varying degrees of intensity based on which the treating physician would recommend a future course of action and other confirmatory tests like CT (Computed Tomography) scan.

Severe aortic stenosis if left untreated becomes a serious health hazard as 50% of the sick patient in whom onset of symptoms is observed, die within an average of 2 years.

COVID-19 impact

It has been observed by many healthcare experts that patients with cardiovascular diseases who contract Covid-19 have serious health implications. Data suggests that 65% of deaths due to Covid – 19 had pre-existing cardiovascular

complexities. Patients with confirmed cardiac disease are highly vulnerable to complications when suffering from Covid-19. Patients who develop cardiac injury face a 4 times increased risk of mortality from Covid-19.

In addition to mortality, delay in treatment of aortic stenosis. may result in sudden death, acute decompensated heart failure, irreversible myocardial injury. Indeed, it becomes of utmost importance for patients to consult their treating Physicians without any further delay. From the patient's perspective transcatheter AVR is advisable to surgical AVR, due to the use of less invasive procedures as TAVR is performed via the transfemoral approach performed under conscious sedation and/or local anesthesia. This strategy may present an opportunity to minimize ICU and hospital stay, given shorter hospitalization and consequent exposure of patients to COVID-19 in hospital and rehabilitation centers.

Moreover, TAVR procedures involving balloon-expandable valves have further shortened the TAVR procedure time to merely 45 minutes, further reducing hospital stay and exposure to the Covid virus. It is also documented that if patients diagnosed with severe symptomatic aortic stenosis are made to wait for Valve replacement – the death rate is 3.6% at 1month & 11.6% at 6 months.

Patients must also be aware of the key indicators of poor outcomes if they are diagnosed with severe symptomatic aortic stenosis. They are as follows-

- Syncope (Fainting) or rapidly progressing dyspnea (shortness of breath, difficulty in breathing)
- Recent congestive heart failure
- Impaired LV function (EF<50%)
- Very severe AS (MG>=60mmHg)

Dr A V Ganesh Kumar, Head of Department of Cardiology, Dr L H Hiranandani Hospital, Mumbai