

Cardiologists and radiologists need to work together - IDoR 2018



This year, the theme for the International Day of Radiology was cardiology. Special focus was given on the need for increased coordination between radiologists and cardiologists.

Cardiac imaging is a rapidly growing sub-specialty of diagnostic radiology. Cardiac radiologists perform imaging examinations using computed tomography (CT) and magnetic resonance imaging (MRI) for more accurate diagnosis and monitoring of heart disease. The role that radiologists and radiographers play in cardiac care is extremely important as they can make a positive contribution to improve diagnoses, pre-procedural work-up and follow-up of patients.

Cardiovascular disease is the <u>leading cause of death</u> globally. It is believed that cardiac imaging technologies can help reduce the burden of cardiovascular disease through prevention, diagnosis, and treatment. Cardiac images constitute over <u>one-third of all radiological tests</u> performed worldwide each year. Cardiac radiologists help treat countless patients and save thousands of lives.

The two most important cardiac imaging modalities include Cardiovascular CT (CCT) and Cardiovascular magnetic resonance (CMR). Cardiac MRI can revolutionise both the investigation and management of heart disease by ensuring accurate diagnosis and more personalised treatment choices.

Cardiac CT can provide complementary diagnostic information to improve diagnostic accuracy. Cardiac CT can provide comprehensive anatomical information while managing patients with suspected prosthetic aortic valve complications. Its use for coronary artery disease assessment can thus compliment the haemodynamic information provided by echocardiography.

Pre-procedural CT imaging in transcatheter aortic valve implantation (TAVI) can allow precise planning and accurate assessment of coronary tree. CT scanners with whole heart coverage can help improve examinations while assessing aorta and coronary arteries in TAVI planning.

Cardiac CT is also an important imaging modality in <u>paediatric heart disease</u>. The advanced spatial and temporal resolution of CCT with a decreased radiation dose has now made CCT an essential diagnostic tool in cardiovascular imaging along with echocardiography, cardiovascular MR and invasive angiography.

CMR is also emerging as a valuable technique in <u>aortic valve disease evaluation</u> (AVD). It has a higher reproducibility compared to echocardiography and is equivalent to cardiac computed tomography angiography for transaortic valvular implantation and surgical aortic valve replacement planning. Overall, CMR is rapidly becoming an all-in-one imaging technique for management and treatment of AVD.

As highlighted on the International Day of Radiology, healthcare systems will need to be more focused on cardiac imaging and will need to understand the value radiology provides in improving outcomes in patients who suffer from cardiovascular disease. Cardiologists and radiologists can tackle cardiovascular disease more efficiently and in a patient-centric manner if they do it together.

Sources: IDoR 2018, WHO, Cardiovascular Ultrasound, British Institute of Radiology Image Credit: iStock

Published on : Fri, 9 Nov 2018