Cardiac CT in diagnosis of congenital heart diseases

Congenital heart disease contributes a major chunk to the global health burden for pediatric population. The prevalence varies geographically. Echocardiography has been traditionally used for diagnosis but the advent of spiral CT has improved the diagnostic capability for CHD. MD CT with CT angiography is an excellent modality for evaluation of the spectrum of congenital heart diseases, since it provides accurate delineation of the anatomy of the heart as well as of the major blood vessels in relation to the heart. The pulmonary complications of CHD can be assessed simultaneously, thereby assisting in appropriate therapeutic triage of these patients. Cardiac CT Angiography enables identification of cyanotic as well as non-cyanotic heart diseases. Often more than one lesion co-exists and multiplanar reconstructions delineate the anatomy precisely. Cyanotic heart diseases may be associated with increased or decreased pulmonary flow. Transposition of great vessels, Fallot’s tetralogy, Patent ductus arteriosus, Total anomalous pulmonary venous drainage are conditions associated with cyanosis and can be well delineated on MDCT. Non cyanotic conditions VSD and ASD, are often detected in isolation or co-existing with cyanotic heart disease. Although cardiac MR is also a good tool for diagnosis of congenital cardiac conditions, the technique is time consuming and requires patient sedation. Therefore MDCT which can be accomplished in the blink of a second in a single breath hold is decidedly better in the pediatric population for accurate diagnosis of CHD. Our experience with cardiac MDCT and CT angiography in diagnosis of congenital heart diseases in the pediatric population will be discussed and a spectrum of imaging findings will be presented.

Biography

Shibani Mehra, currently working as Professor Radio diagnosis PGIMER DR RML Hospital New Delhi, a central government hospital with state of the art facilities and 102 postgraduate students in all clinical departments. In my current position I have the privilege of being involved in service to the community and the society by providing excellent diagnostic care to the inpatients and OPD patients referred for diagnostic imaging. Apart from diagnostic work I have been actively involved in Post graduate medical education and training since 1997 in this institute, and prior to that at Lady Hardinge Medical College & Smt Sucheta Kripalani Hospital during my 3 year 6 month Senior Residency in that institute. I have expertise in Conventional Radiology, Sonography as well as MRI and CT. I have gained a lot during my 22 years as a Radiologist and have amassed good amount of experience and gained in knowledge and professional skills during my working period in these premiere institutes. Apart from this I have administrative capability and have been involved with projects and decisions requiring lot of responsibility. I have a number of publications to my credit and have participated as faculty in a number of national and international conferences.

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