

MR imaging in cardiomyopathy

T. K. KAPILAMOORTHY¹, N. Bodhey², and V. Ajit Kumar²
¹RADIOLOGY, S.C.T.I.M.S.T., TRIVANDRUM, KERALA, India, ²SCTIMST

PURPOSE:

1. To study the extent and pattern of myocardial involvement in different types of cardiomyopathy.
2. To study the LV /RV function and pattern of delayed contrast enhancement
3. To assess the feasibility of endocardectomy and subsequent follow up.
4. To differentiate endomyocardial fibrosis from other non-ischemic cardiomyopathies

OUTLINE OF CONTENT:

40 patients of cardiomyopathy of various etiology were included in the study .Assessment of morphology and function (ejection fraction and left/right ventricular mass)and velocities in pulmonary artery& aorta was done by SE sequences ,cine images , velocity encoding sequences of MRI scan and Argus soft ware. Using IR recovery sequences postcontrast delayed scans varying from 10 mts to 90 mts ,were taken.

The non-ischaemic cardiomyopathies were categorized according to their enhancement pattern.In endomyocardial fibrosis , myocardium involvement (3 grades) was seen with partial obliteration of ventricular (RV/LV) cavity predominantly from the apex of ventricle or in the ventricular inflow regions. Ventricular cavity showed characteristic crevices and outpouchings in cine images. AV valve incompetence consequent to plastering of the subvalvular mechanisms was seen in 50 % of cases. Associated thrombus(in10%)and pericardial thickening/effusion (in 30%) was seen.. The LV ejection fraction(varied from 30% to 50%)was a effective tool to suggest improvement in postsurgical cases.The time delay for contrast enhancement was more (25-90 mts)when compared to ischaemic heart disease.The pattern of enhancement was irregular and bizarre unlike in ischaemic myocardium.

SUMMARY: 1. It is possible to differentiate various cardiomyopathies by MRI.

2. Tropical endomyocardial fibrosis is best studied by MRI
3. Delayed enhancement pattern of myocardium is typical and different from other non- ischaemic/ischaemic diseases.
- 4.. Functional and morphological assessment is better made out than echocardiography.
5. Presurgical evaluation & subsequent postsurgical follow up best made by MRI.