Dilated CMP

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Indications and Purpose of the Scan

- In patients with dilated ventricular chamber, CMR is recommended for etiological diagnosis and of prognostic value.

Description

- Dilated CMP is characterized by left or biventricular dilatation with impaired contractility in the absence of abnormal loading conditions and severe coronary artery disease, and it is associated with significant morbidity and mortality due to progressive heart failure and sudden cardiac death. Identification of prognostic factors is necessary to enable physicians to accurately stratify risk in patients with dilated CMP and tailor management accordingly.

Why CMR (specific advantages)

- Differential diagnosis between ischemic and non-ischemic dilated CMP
- Differential diagnosis in non-ischemic dilated CMP
- Accurate assessment of ventricular volumes, wall thickness, and contractile function, as well as tissue characterization (pretreatment and follow-up)
- Provide prognostic information (LGE, T1 mapping, ECV, etc.)

Evidence

- Provide prognostic information: (472 patients): Assessment of mid-wall fibrosis with LGE-CMR imaging provided independent prognostic information beyond LVEF in patients with non-ischemic dilated cardiomyopathy. LGE-CMR imaging improved risk stratification beyond LVEF for all-cause mortality and sudden cardiac death. (637 patients): Non-invasive measure of diffuse myocardial disease by T1 mapping was significantly predictive of all-cause mortality and heart failure events in non-ischemic dilated CMP.
- Monitor therapy response and aid risk stratification: (130 patients): Dilated CMP patients revealed elevated levels of ECV reflecting diffuse myocardial fibrosis, which had contributed to monitor therapy response and aid risk stratification in different stages of Dilated CMP.

Contraindications

- Any implanted device that is not MRI conditional
- Inability to lie flat
- Inability to tolerate the scan
- Altered mental status/ inability to follow verbal commands in scanner
- Severe arrhythmias
- Including the presence of contraindications to MRI and severe renal failure (eGFR<30).

More Information

References


