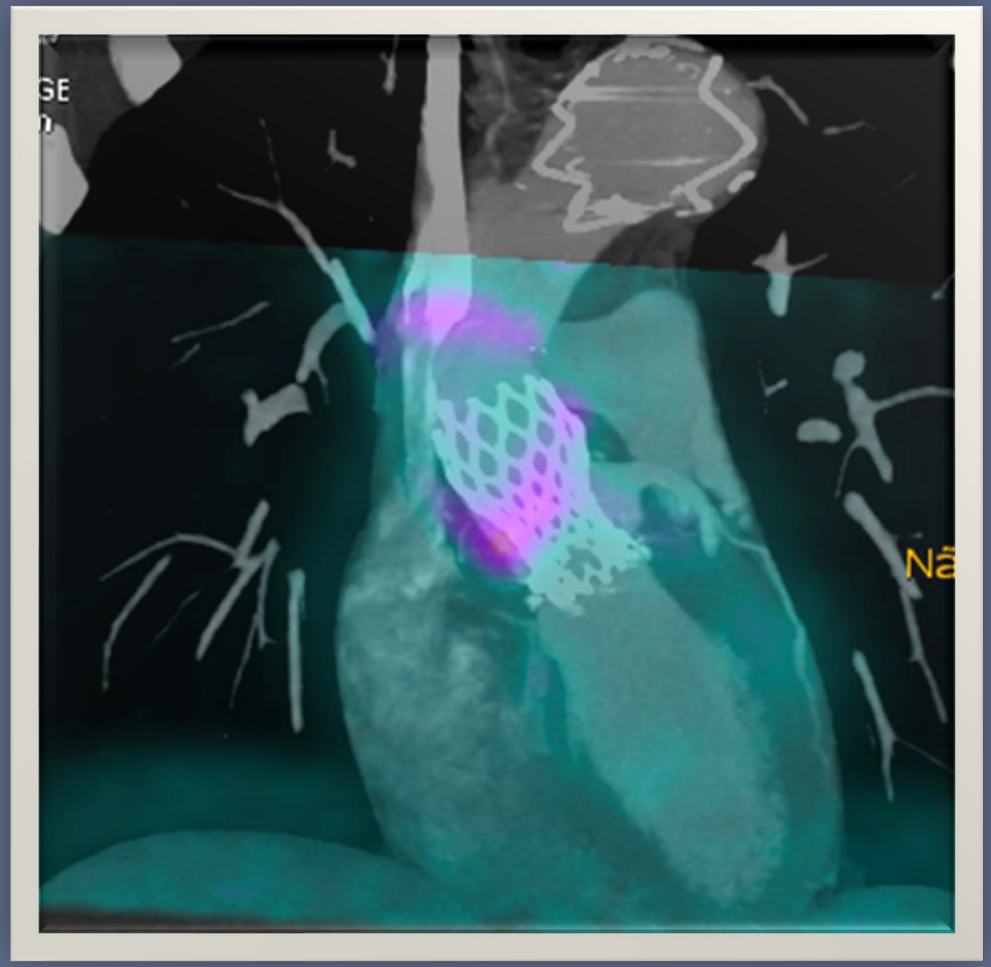
RSNA 2021
REDEFINING RADIOLOGY
November 28 to December 2



Multidisciplinary Cardiology Imaging Reporting Team: Initial 10-month Experience In A Tertiary Cardiology Hospital During COVID-19 Pandemic

C. T. Mesquita J. S. Da Silveira, I C. Palazzo, C. E. Rochitte, N. L. Correa, P. N. Castro, F. Salomao lopes Costa6, A. Rabischoffsky, D. C. Machado, A. C. Oliveira, JR5, A. S. Colafranceschi;

claudiotinocomesquita@id.uff.br

Rio de Janeiro, BRAZIL

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Purpose

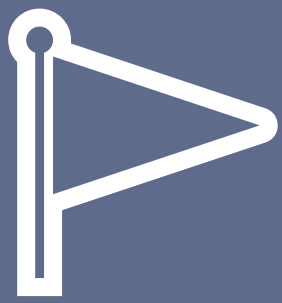
- Integrating multiple specialties in a single meaningful report requires coordinated multispecialty collaboration. To meet this need, we developed a new strategy: a multidisciplinary cardiovascular integrated report (MCIR).
- In this report, we provide the first analysis of this experience in a tertiary cardiology hospital.

Materials & Methods

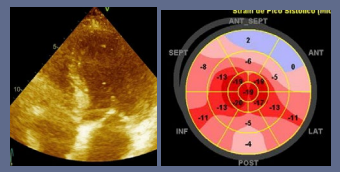
- Our **Multidisciplinary Cardiovascular Imaging Reporting Team (MCIRT) includes specialists in nuclear cardiology, clinical cardiovascular medicine and surgery, echocardiography, and radiology.**
- MCIRT is organized as a team discussion that meets weekly in-person/online (as social distancing is needed) and generates a single integrated report of cardiovascular imaging studies (MCIR) as demanded by requesting physicians or by the imaging team. The online tool used was TEAMS by Microsoft.
- We prospectively obtained clinical, diagnostic aspects, and decision making data during the first 10 months of experience.

Multidisciplinary Cardiovascular Reporting Team

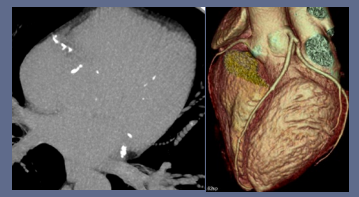
The objective of the multidisciplinary team is to generate a single report integrating multiple imaging modality results, facilitating interpretation and clinical decisions.



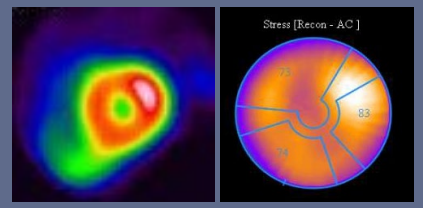
Echocardiography



Calcium scoring
CT angiography

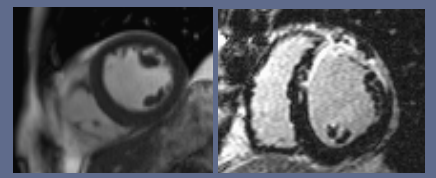


Nuclear exams



Other relevant exams

Cardiac MRI



A red flag is delivered to the team whenever patients are submitted to at least two cardiovascular imaging modalities within a period of 45 days. A report template is filled separately by all subspecialties and cases are reviewed in conjunction in a weekly basis.

Multimodality Cardiovascular Imaging Report

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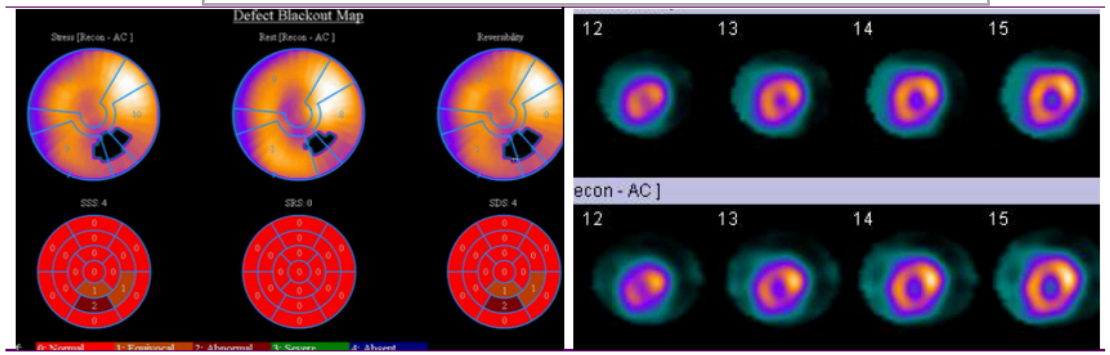
66 year-old man refered for evaluation of SOB during exercise.

Myocardial Perfusion Imaging



Reversible defect in the inferolateral segments. Total ischemic area of 6%. Tradmill exercise test: negative for ischemia. 7,23 METS. 85%MPHR.

Dr. Claudio Mesquita Tinoco

Coronary CT Angiogram

CAC score 1205 (80th percentil). Predominatly nonobsctrutive coronary lesions. CAD RADS 2

Dr. Amarino C. de Oliveira Jr.

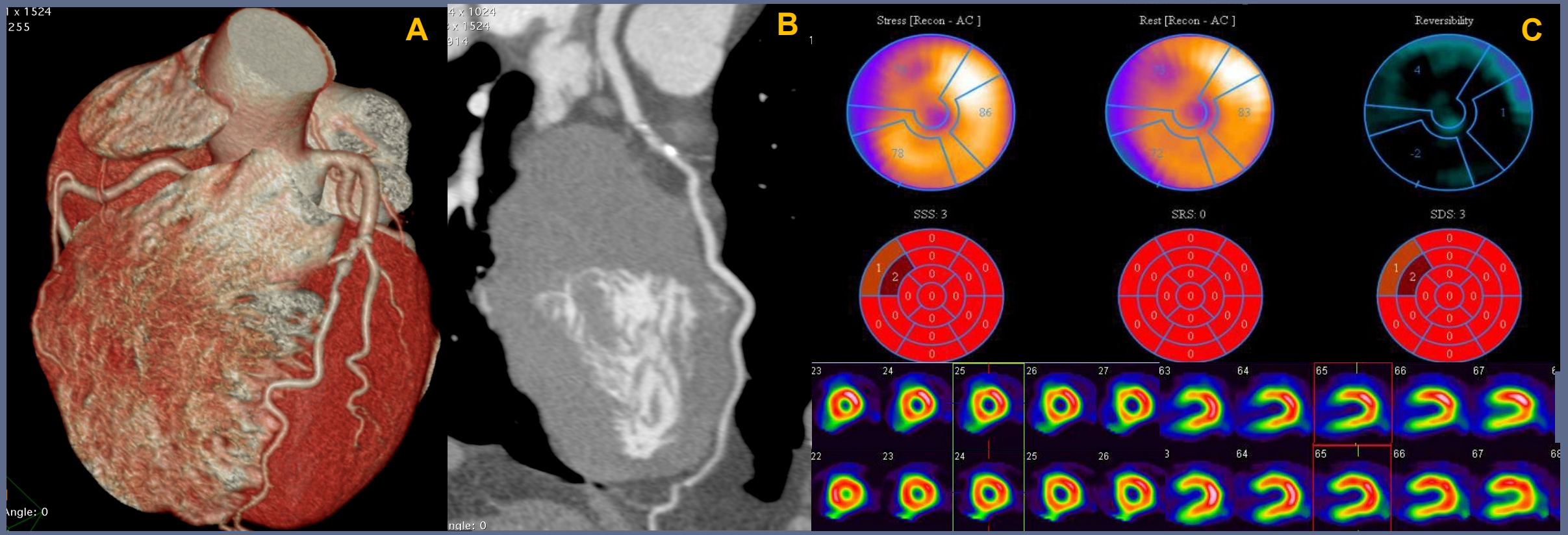
Comments

Mutivascular coronary disease. Small reversible defect in LCX territory.

Conclusion

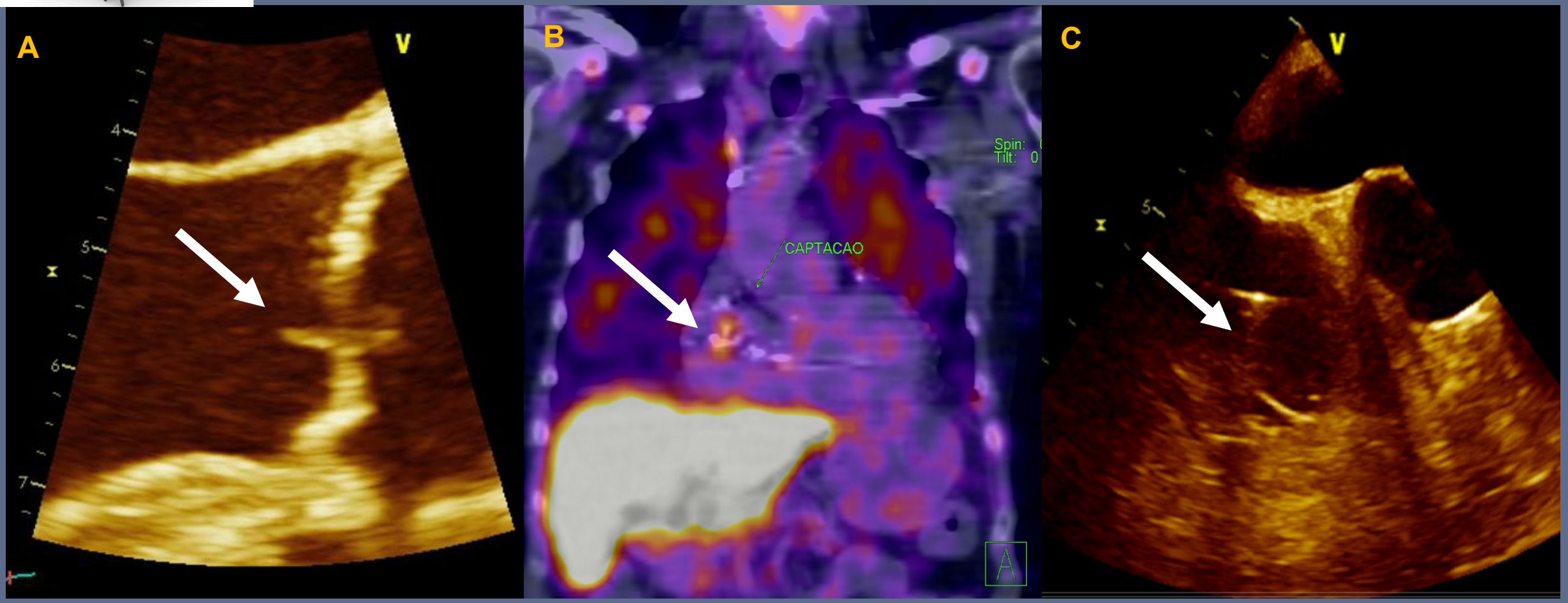
Extensive coronary disease with restricted ischemic area

Multidisciplinary Cardiovascular Reporting Team
Coronary Artery Disease



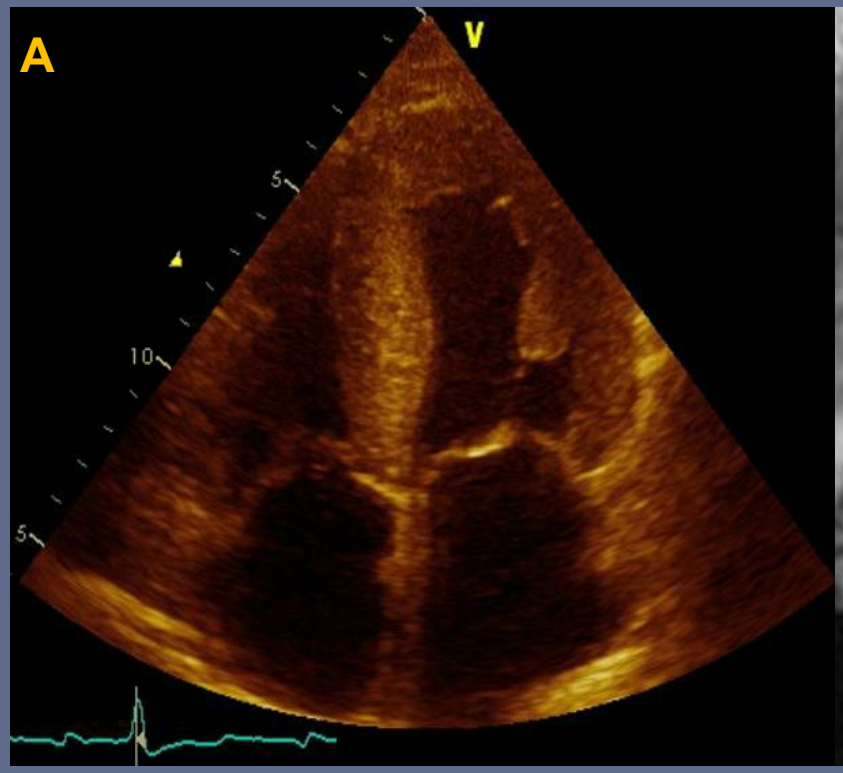
54 y asymptomatic male, ECG abnormalities on treadmill stress test. (A) CTA demonstrates partial calcified plaque and moderate to severe isolated stenosis in the proximal left anterior descending artery. Myocardial scintigraphy shows reversible perfusion defects in the anteroseptal region (4%), compatible with stress induced ischemia.

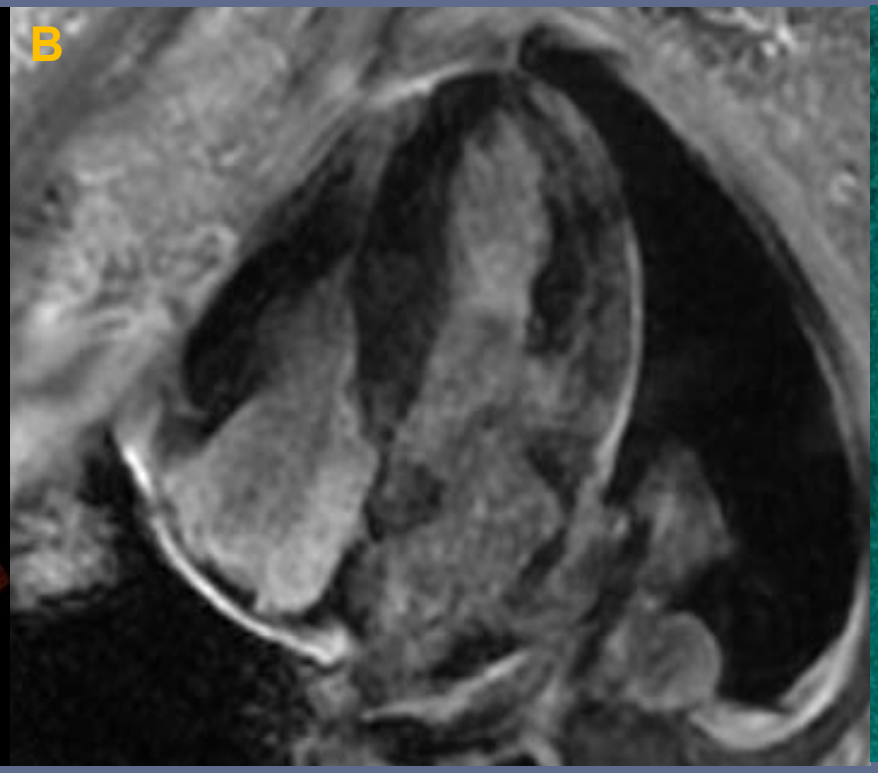
Multidisciplinary Cardiovascular Reporting Team
Infectious Endocarditis

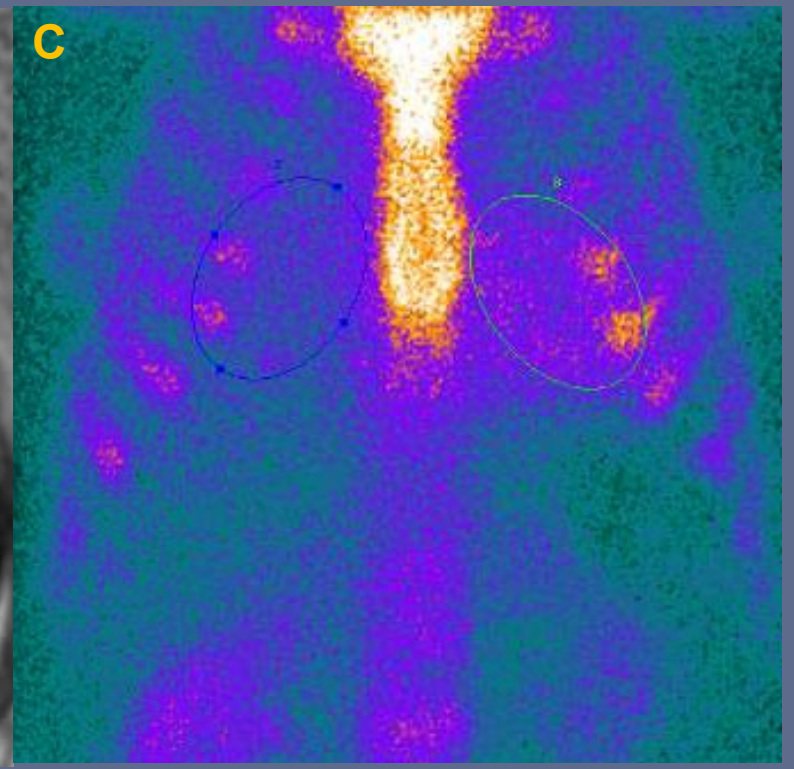


77y old male, prior history of arrythmia and placement of pacemaker, admitted with pericardial effusion and symptoms of dysphagia and weight loss. Evolution with upper extremity thrombophlebitis and fever. Endocarditis was suspected. (A) Echocardiography (TTE) shows aortic valve vegetation (white arrow) and leukocyte scintigraphy shows uptake along pacermaker cables, not depicted by TTE. TEE during surgical cable extraction demonstrates vegetations along cables.

Multidisciplinary Cardiovascular Reporting Team
TTR Amyloidosis





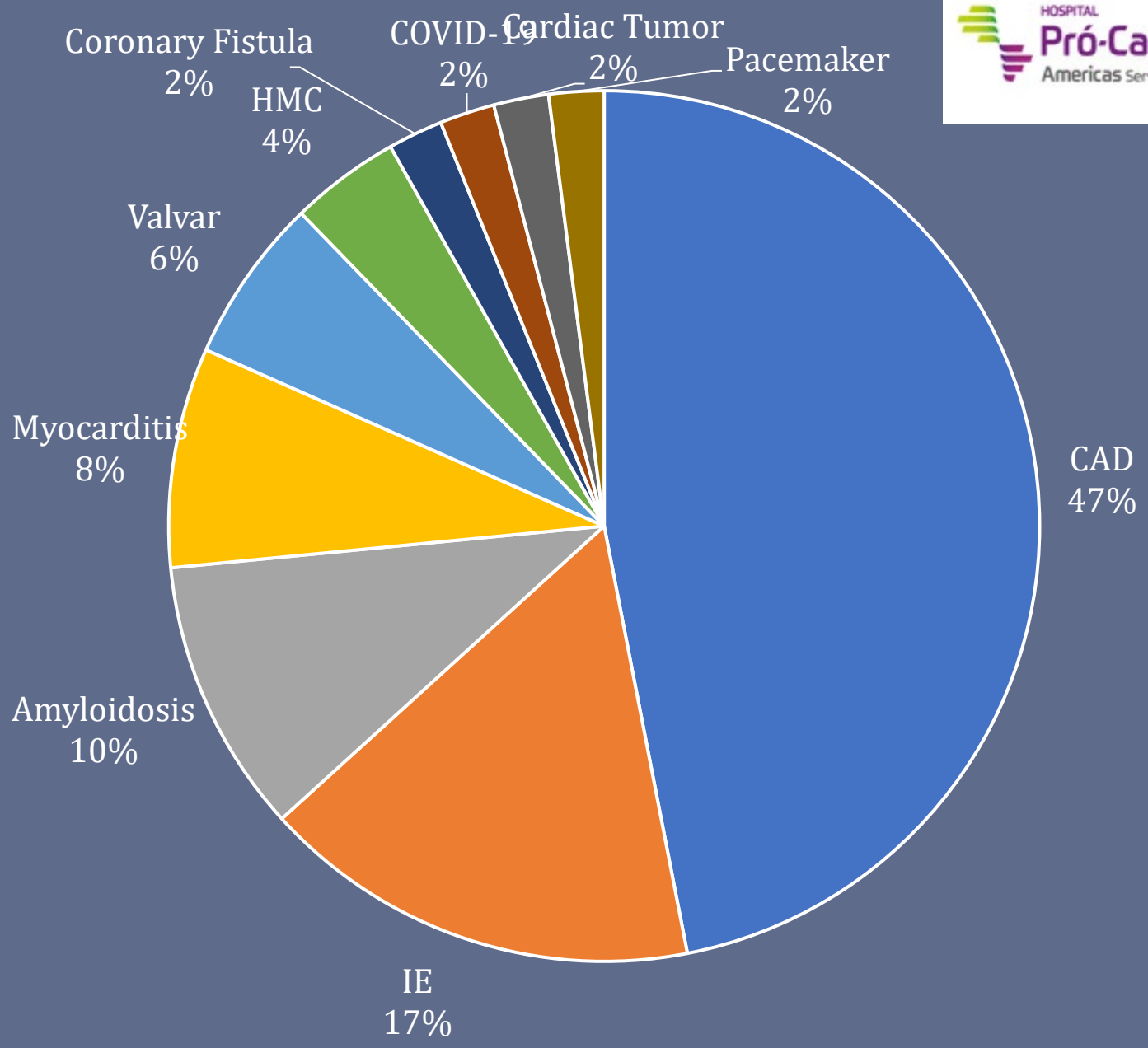


64y old male, admitted to investigate fatigue and dyspnea.. TTE depicts lef ventricular hypertrophy and specked myocardium (a). Delayed enhancement CMR image demonstrates heterogeneous myocardial enhancement (b) and PYP scintigraphy confirms the diagnosis of amyloidosis and show grade 2 Perugini's cardiac uptake (c).

Results

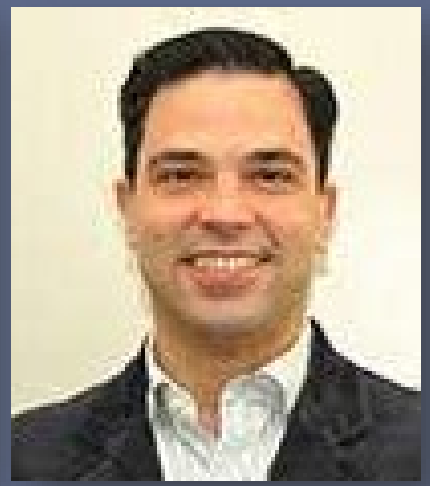
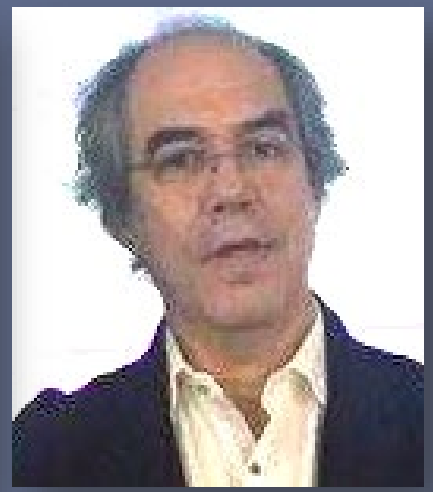
In 10 months, there were 56 clinical cases that were reported as MCIR. Coronary artery disease (CAD) was the most common etiology demanding integrated reports (23 cases - 41%), most frequently including coronary CT angiography and myocardial perfusion scintigraphy. The second commonest disease was cardiac infectious endocarditis (IE) in 8 cases (14%).

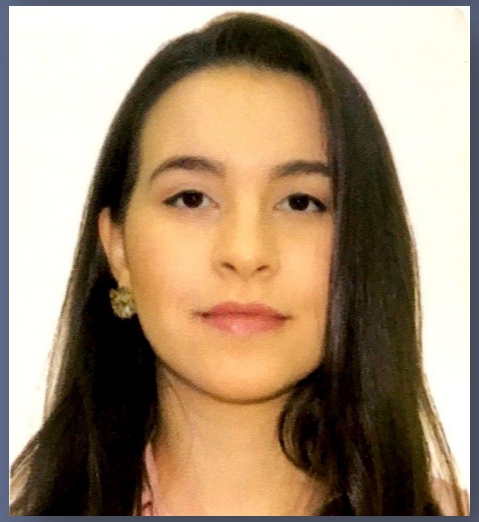
The online discussion was limited because of internet instability in less than 5% of cases. The impact in decision-making and clinician satisfaction was significant with some physicians bringing cases from other institutions for discussion.

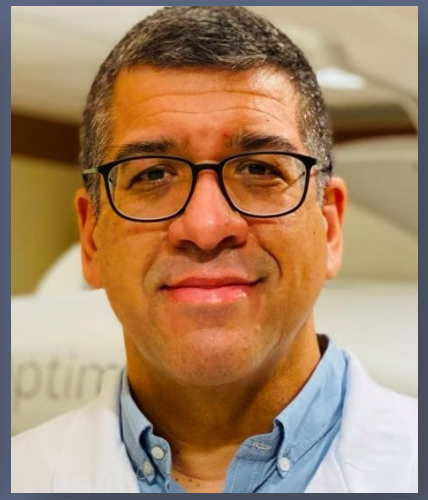


MCIR Team – Hospital Pró-Cardíaco







Conclusion

- We report a novel method to communicate cardiovascular imaging results as a single integrated report.
- This report was produced by a **multidisciplinary team that engages multiple clinical/surgical and imaging specialists contributing to delivering efficient, organized, and evidence and value-based care**.
- MCIR was technically successful in almost all cases, and it was mostly used in diseases that demand difficult decision-making like CAD, IE and CA.