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THE ROLE OF ECG, ECHO AND CMR IN DIAGNOSIS AND PROGNOSIS OF PERIPARTUM CARDIOMYOPATHY - A DEATH THREAT IN YOUNG WOMEN

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ABSTRACT

Peripartum cardiomyopathy (PPCM) is a rare type of heart dysfunction characterized by acute impairment of cardiac contractility that occurs either shortly before or after delivery in women that weren't previously diagnosed with cardiac disease. Particular attention should be paid to the fact that it is a considerable cause of late maternal morbidity and mortality and about 50% of the women affected regain complete function. Early diagnosis is crucial to start treatment and prevent deaths of young mothers. This narrative review focuses on imaging which is one of the most important parts of identifying this condition. It summarizes and provides analysis of various methods of imaging. The main opinions that we have in the diagnostic process are electrocardiography (ECG), echocardiography (ECHO) and cardiac magnetic resonance (CMR). Each of them has characteristic abnormalities in peripartum cardiomyopathy. Electrocardiography presents with sinus tachycardia, abnormal ST patterns, T-wave abnormalities and many others explained in the review. Echocardiography is characterized by in impaired systolic ejection fraction of the left ventricle, dilatation of chambers and reduced strains. Furthermore, it allows us to exclude different underlying causes of heart dysfunction. Besides echocardiography, cardiac magnetic resonance also helps us to conduct differential diagnosis. The changes we might see in resonance are correlating with echocardiographic findings. Additionally, we might access tissue structure like myocyte edema, extracellular volume, necrosis and fibrosis. Many of the reported findings are prognostically relevant in this disease and should be taken into consideration, as they may aid in differentiating women at risk of unfavorable outcomes.

KEYWORDS

Peripartum Cardiomyopathy, Electrocardiography, Echocardiography, Magnetic Resonance

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1. Introduction

Peripartum cardiomyopathy is an idiopathic heart failure that is characterized by acute reduction of left ventricular ejection fraction (LVEF <45%) that progresses over time. It typically presents itself within one month before labor or more frequently up to 5/6 months after delivery, miscarriage or termination in women without any previous cardiac problems including congenital diseases, valve dysfunction, coronary artery disease or other structural defects (Arany, 2024a; Sliwa et al., 2010). It is a diagnosis from the exclusion of other causes of heart failure. (Sliwa et al., 2010) More than half of the women affected regain cardiac function, but morbidity and mortality remain high, with reported rates ranging from 3%-40%. (Hoevelmann et al., 2025) Deaths are primarily due to heart failure itself, sudden cardiac death (SCD) or thromboembolic events. Some patients require implantable cardioverter-defibrillator, cardiac resynchronization therapy, left ventricular-assist devices or cardiac transplantation. (Duncker et al., 2014; Sliwa et al., 2020, 2025) The incidence of PPCM varies between regions of the world and ethnicity. It is the most common in countries with tropical climates like Nigeria (1 per 102 live births) and significantly lower in countries with colder climates, the lowest reported in Japan (1 per 20 000) (Sliwa et al., 2025). Generally, the incidence across all stages of pregnancy in high income countries is 0,03% and in the low-income ones 0,08% (Tao et al., 2026). It is important to note that many of the cases of PPCM remain undiagnosed due to non-specific and less severe symptoms, lack of proper healthcare or diagnostic tools (Sliwa et al., 2021). Besides ethnicity and demographics, risk factors also include genetic predisposition, age <20 or >40, anemia, hypertensive disorder, diabetes, smoking and multiple gestation pregnancies. (Arany, 2024b; Davis et al., 2020; De Backer et al., 2025) The underdiagnosis correlates with the fact that the symptoms of PPCM also coincide with normal features of pregnancy and puerperium such as swollen ankles, fatigue and mild dyspnea. Generally clinical representation parallel that seen in heart failure from mild symptoms mentioned to even cardiogenic shock and death. Pathophysiology of this cardiomyopathy remains unclear, considering recent papers it is thought to be a combination of genetic

predisposition (noted in about 15% of patients with the most found being titin truncating variants), risk factors, vascular and metabolic maladaptation, inflammation and hormonal fluctuations—particularly involving prolactin, estrogen, progesterone, and fibroblast growth factor-21. (De Backer et al., 2025; Heymans et al., 2023) Treatment mainly composes of heart failure medication modified to pregnancy, bromocriptine and anticoagulation. In severe cases catecholamines, ICD, CRT, mechanical cardiac support and transplantation are considered. (Arany, 2024b; Sliwa et al., 2025) The main focus of this paper is the diagnosis of PPCM with imaging including ECG, ECHO and CMR, its properties, limitations, data that can be obtained from them and information on prognosis that it gives.

2. Methods

This narrative review was conducted through a search of available full-text articles in English and Polish using PubMed and Scopus databases using predefined keywords: “peripartum cardiomyopathy”, “Electrocardiography”, “Echocardiography”, “Cardiac magnetic resonance”. Papers published between 2011 and 2026 were included. The selection excluded studies on animals, conference abstracts, non-peer-reviewed sources and case reviews. The search focused on characteristics in imaging seen in PPCM, prognostic value and ways to minimize delays in recognition by using scales and programs.

3. Results

3.1 Electrocardiography (ECG)

Electrocardiography is one of the most fundamental diagnostic tools used in cardiology, the same applies to peripartum cardiomyopathy. The 12-lead ECG shows abnormalities in the majority of PPCM patients. (Tibazarwa Kemi et al., 2012; Umar & Jibril Bamaiyi, 2020) Contrary to echocardiography or CMR it is easily accessible, cost effective and easy to use, therefore it has been suggested not only for diagnostic reasons but also for monitoring clinical progress. Accordingly, it is important for the physicians to understand various ECGs pictures of PCCM and use it appropriately to diagnose patients, allowing them to get further examination and much needed treatment. There have been studies on usage of ECG in PPCM in 106 Nigerian women (Umar & Jibril Bamaiyi, 2020),78 South African women (Tibazarwa Kemi et al., 2012), 66 South African women (Hoevelmann et al., 2019), 100 Northern American women (Honigberg et al., 2019) and also a case-control study in 54 Nigerian women with 77 patients in control group (Karaye et al., 2016). In these studies, it was shown that the abnormalities are present in peripartum cardiomyopathy in most of the cases, up to 96%. Major ECG abnormalities were detected in 49 % (95% CI: 37–60%) and minor in 62% (95% CI: 51–74%) of the cases. Major ones defined as: Q wave, ST- segment depression, second and third atrioventricular block, T-wave inversion, LBBB, RBBB, frequent premature atrial or ventricular beats, atrial flutter or fibrillation. Minor described as borderline Q waves, high-amplitude R waves, axis deviations, borderline ST segment depression, T wave flattening or low QRS voltage. (Tibazarwa Kemi et al., 2012) The most common changes presented in the studies were: sinus tachycardia (32-92%), abnormal ST patterns (6-70%), T-wave abnormalities (59-83%), P wave abnormalities like left atrial enlargement (18.18%), prolonged QRS, prolonged QTc (5-47%), Q waves, axis deviation (20-28%), premature ventricular (4-5%) or atrial extrasystoles. The results are promising for suspecting the disease early on, because statistically significant values suggest that each additional heartbeat per minute increases the risk of PPCM by 6.4%, ST-T changes raise the likelihood 12.06-fold. The QRS had lower correlation, but it might suggest greater left ventricular dimension and end systolic volume index. There was a difference between Nigerian studies in the findings of QRS prolongation, but it was probably due to age selection on the women and presence of LVH. Generally, it may also happen in heart blocks or Wolff-Parkinson-White (WPW), which should be considered, but those are rare findings. A risk score was suggested using previously mentioned: tachycardia, prolonged QRS and ST-T changes in screening because it had a sensitivity of 85.2%, specificity of 64.9%, negative predictive value of 86.2% (Karaye et al., 2016; Umar & Jibril Bamaiyi, 2020). The results lead to creation of artificial intelligence programs that analyze ECGs using deep learning models for detecting cardiomyopathy. The solution allowed to detect from 87% up to 98% of cases depending on race and severity of heart dysfunction. (Adedinsewo et al., 2021; Lee et al., 2022) Even 1-lead ECG algorithms showed promising results with areas under the curve of 0,73-0,93. (Jung et al., 2023; Karabayir et al., 2024) These findings open new possibilities of detecting PPCM in the future potentially even via smartwatches. Such inventions might help obstetricians select and refer suspected women to cardiologists allowing them to get further evaluation such as echocardiography and blood tests including BNP. The optimal timing might help in selecting more of the cases and start treatment early which might reduce serious outcomes. However, everything said it does not mean that normal ECG rules out the diagnosis of PPCM and upon

suspicion it should be diagnosed further. Additionally, many factors affect electrocardiography like age, gender, race and even the pregnancy itself. ECG might be altered by diaphragm raising and changing the arrangement of organs, hemodynamic changes, hormonal modulation or mechanical shifting of the heart during pregnancy. (Sunitha M. et al., 2014) The probability of peripartum cardiomyopathy is not the only information we can source from ECG. It can also be associated with the echocardiographic imaging and final outcome for the disease. Studies show that women with the abnormalities in ECG are more likely to have more severe presentation, be in need of inotropes and have larger LV end-diastolic dimension. (Duncker et al., 2017; Honigberg et al., 2019) Sinus tachycardia, as a common abnormality also in patients with HF and DCM, correlates linearly with poor systolic function ($p < .0001$) where every extra beat per minute decreases LVEF percentage 0.24 ± 0.04 units. (Cooney et al., 2022; Mbakwem et al., 2021) Women with tachycardia are 63% less likely to regain systolic function at 6 months, but at 12 months this correlation is not statistically significant. Rapid heartbeat also correlates with increased mortality. It is 4 times more probable that the disease will lead to death in women initially presenting with HR >120/min (OR 4.17, 95% CI 1.06–16.35, $p = .041$) and 5 times higher with HR >110 bpm (OR = 4.95, 95% CI 1.19–20.67, $p = .028$). (Duncker et al., 2017) All in all, tachycardia along with prolonged Qtc (>460m) are both associated with poorer prognosis with increased risk of readmission to hospital or death. (Mbakwem et al., 2021; Umar & Jibril Bamaiyi, 2020) Lower left ventricle ejection fraction is seen in patients with major T wave abnormalities like inversion. There was a study conducted mainly focusing on positive T waves in lead aVR that showed correlation between its presence and previously mentioned reduced LVEF and also greater LV end-diastolic and end-systolic diameter that persisted in follow ups (p=0,001). Women with this ECG abnormality have a higher risk of cardiac death (p=0,001) and arrhythmic events. (Ekizler et al., 2019) Besides T waves, patients presenting with ST -segment elevation and left atrial abnormalities are also less likely to get full recovery. (Honigberg et al., 2019; Tibazarwa Kemi et al., 2012) The prolonged QRS might suggest dilatation of left ventricle and end-systolic volume index that translates to worse outcomes. (Mbakwem et al., 2021) Moreover the fragmented QRS that is represented in ECG as various RSR' patterns or additional notching of waves R and S is also correlated with myocardial fibrosis and nonrecovery (OR: 5.986, 95% CI: 1.313–11.787, $p = .014$). (Tekin Tak et al., 2020) Conversely, a normal ECG correlates with recovery in LVEF to ≥50% and no complications at 1 year. (Honigberg et al., 2019)

Arrhythmias and even sudden cardiac death (SCD) are a threat in women newly diagnosed with PPCM, but one ECG often won't show the problem. About 30% of deaths might be due to SCD and it is the second reason right after the heart failure itself. (Sliwa et al., 2020) In the study of 9841 PPCM cases in the US, arrhythmias were seen in 18.7% of women. The most common being ventricular tachycardia (VT) in 4.2%, followed by atrial fibrillation in 1.3% and ventricular fibrillation in 1%. In less than 1% atrioventricular blocks, atrial flutter, WPW, PVC and SVT were identified. (Mallikethi-Reddy et al., 2017) In other studies the percentages were higher presenting ventricular arrhythmias in even 6- 25% of cases, but those were conducted on a very limited number of cases with more severe presentations. (Duncker et al., 2014, 2017; Hoevelmann et al., 2023; Laghari et al., 2013; Mallikethi-Reddy et al., 2017) Considering the results of the studies there was a correlation between lower LVEF and more frequent arrhythmias. Holter ECG monitoring or implantable loop recorder implantation in such cases might be a solution to catch the abnormalities. With echocardiography it might help and select women in which ICD implantation or WCD (wearable cardioverter/defibrillator) should be considered to prevent sudden arrhythmic deaths. (Duncker et al., 2017; Hoevelmann et al., 2023; Mallikethi-Reddy et al., 2017) It is important because arrhythmias correlate with 3 times higher mortality, longer hospital stays and higher costs. Generally, all the information on ECG in PPCM are based on papers with limited cases and restricted features so the findings vary between studies and so they should be verified in larger cohorts.

3.2 Echocardiography (ECHO)

Ultrasonography is not only used in pregnancy for monitoring the baby and its wellbeing, as a non-invasive and fetus safe imaging it is a widely used method to evaluate other organs including the heart. Transthoracic echocardiography (TTE) is fundamental in peripartum cardiomyopathy diagnosis and observation at follow ups. Thus, it should be used in every case in which PPCM is suspected. Using ultrasound waves the machine allows visualization of the heart function including the impaired systolic ejection fraction of the left ventricle, hypokinesia or dilatation. It is important to exclude different underlying causes of heart failure like valve abnormalities or other structural defects. In addition to LVEF, parameters analyzed include dilatation of ventricles and enlargement of atria, that is due to cardiac remodeling caused by volume overload.

Not only two dimensional echocardiography is used to evaluate the volumetry of the chamber, the three dimensional one is being more commonly used and is also helpful to rule out valvular dysfunction. The usage of regional wall motion can help to distinguish coronary artery disease or fibrosis in myocardium. (Heymans et al., 2023; Kim & Yoo, 2022)

The ESC defines PPCM as heart failure with reduced systolic ejection fraction <45% with or without LV dilatation (De Backer et al., 2025), but such strict criteria in this disease might lead to underdiagnosis. (Kim & Yoo, 2022) At the time of identification the mean LVEF depending on the paper is 32,9 - 35,7 %. (Nabbaale et al., 2026; Sliwa et al., 2017) Generally recovery of myocardium presenting with recurrence of LVEF> 50% is higher compared to other types of cardiomyopathies. Registries show that about 46% (25 - 62%) at 6 months follow up will get to that point. (De Backer et al., 2025; Mallikethi-Reddy et al., 2017; Nabbaale et al., 2026) What is interesting is that the recovery varies between different researched groups with best outcomes in Asia-Pacific (77.5%) and least common in the Middle East (32.7%) ($p < 0.001$). The follow ups from 51 countries after 1 year showed a rise of LVEF by 21.2% (±13.6), LV end-diastolic and end-systolic diameter decreased by 6.3 mm (±6.3) and 11.2 mm (±9.1). In peripartum cardiomyopathy the heart function is progressing in time. The most changes occur during the first 6 months (Jackson, Bauersachs, et al., 2024), but some with persistent LV dysfunction recover in the long term. (Tuvali et al., 2025)

It is worth noting that improvement in LVEF does not necessarily mean normalization of global longitudinal strain (GLS). (Bortnick et al., 2021) A study on 20 patients showed that between women with full recovery and healthy ones the only echocardiographic significant differential was said GLS (18.1 ± 2.7 vs 20.16 ± 1.7, $p = 0.02$) and global circumferential strain (22.1 ± 2.9 vs 24.4 ± 1.19, $p = 0.01$). (Akgoz & Gurkan, 2022) On the other hand, different papers also specify increased arterial stiffness and reduced LA function in recovered women. (Johansson et al., 2021) Studies do not agree on GLS correlation with recovery, one states that after adjusting for LVEF they are statistically relevant (GLS odds ratio, 2.07; P <.001; GCS odds ratio, 1.37; P =.005) (Sugahara et al., 2019), while others state that it does not. (Briasoulis et al., 2016; Meledin et al., 2025) These measures in echocardiography are not the only ones that can point to higher risk of complications and poorer prognosis. Another parameters contain: LVEF <30%, biventricular dysfunction, LV end-diastolic diameter >56-60mm and significant mitral regurgitation (MR). (De Backer et al., 2025; Prameswari et al., 2023) Using Italian Multicentre Registry of 28 women, nonrecovery was seen in those with severe dilatation not only of left ventricle (61.2 ± 8.1 mm) (p=0,017) but also left atrium (47.0 ± 24.7 ml/m2) (p=0,013), impaired global longitudinal strain plays a role (GLS 9.0 ± 1.4 %), (p=0,001) as well as right ventricle systolic function measured with TAPSE (17.5 ± 4.2 mm) (p=0,024) and diastolic one (RV EDD 31.3 ± 5.7) (p<0,001). (Ilardi et al., 2026) A study on 100 women shows that another parameter corresponding with worse outcomes is RV fractional area change ≤30% (p <0,001). (Blauwet et al., 2016) The statement is supported in paper on 43 patients where RVFAC <31.4% with 86% accuracy predicted poorer LV recovery as well as LAVi >29.6 ml/m2 with 72% accuracy.(Ravi Kiran et al., 2021) It is worth noting that the study by Karaye et al additionally demonstrates that right ventricular fractional area change is a more precise measure than free wall parameters. It also shows that RVDD correlates with RV E/e′ and pulmonary hypertension. (Karaye et al., 2017) Another essential component that should not be omitted during echocardiography is evaluation of ventricular thrombus formation. Varying on different studies it might happen in 6,3- 22.4 % patients. (Fu et al., 2023; Jackson, Bauersachs, et al., 2024; Nabbaale et al., 2026; Sliwa et al., 2017) Statistically, an intracardiac thrombus is more likely to form in patients with lower LVEF and a greater RV end-diastolic diameter, while it does not correlate with LVEDD. (Fu et al., 2023)

There was a risk stratification method introduced in paper based on 113 asian women that showed sensitivity of 57% and specificity of 93% in selecting those that do not predict LV recovery and should be treated in tertiary care centers to give them the best chance of survival. The scale was set to a maximum of 11 points, and 3 points were given for each of the following features: significant MR, LVEED >56mm, NYHA FC IV; and 2 points for LVEF <30%. If the score was >8 there was an 18 times higher chance for the patient to not regain the function of the heart (p<0,001). (Prameswari et al., 2023) Another scale was based on 465 women from 51 countries, it is based on LVEF (>35% or <35%) and LVEED (<53 mm, 53–61 mm, and ≥62 mm) at diagnosis, human development index (a summary measure of a country's social and economic development), time since the start of symptoms (≤10 days and >10 days), QRS duration (≤80 ms, 81–109 ms, and ≥110 ms) and pre-eclampsia. This way demonstrated satisfactory discriminative ability, with a C-statistic of 0.79 (95% CI 0.74–0.83). (Jackson, Goland, et al., 2024) The models require validation in larger studies, but the results are promising. Implementation of such methods might help to reduce mortality by providing better care to those that are in danger of developing serious complications.

3.3 Cardiac Magnetic Resonance (CMR)

As previously mentioned, PPCM is a diagnosis of exclusion. Sometimes ECG and ECHO characterized above are not enough and more tests are needed. The next step in differential diagnosis is cardiac magnetic resonance. For a long time it has been used to detect ischemia, inflammation, other cardiomyopathies, congenital and acquired heart defects or tumors. It is a radiation-free technique that allows us to accurately assess cardiac function including volume, function and mass. As noted earlier, PPCMs pathogenic pathway is still to be investigated further but components mentioned are inflammation and immune response that can alter the tissue structure. These alterations might be seen in CMR. Protocols that are typically seen in PPCM diagnosis contain cine images electrocardiographicly-gated, segmented k-space steady-state free-precession (SSFP) technique in the long-axis and short-axis that allows to see function of the heart. The tissue is analyzed in quantitative techniques such as T1, T2 mapping with extracellular volume (ECV). The gadolinium contrast is used to show late enhancement (LGE). Its agents accumulate in places of necrosis, fibrosis or infiltrated myocardium. (Isaak et al., 2022; Petryka-Mazurkiewicz et al., 2021) It is worth noting that the gadolinium contrast is eliminated from mother's body very fast and so the newborn has low exposure and it is said to be safe for the infant. A different situation occurs when the contrast has to be given while the woman is still pregnant, because large studies were not conducted and the fetal safety remains uncertain. (Sr. & Sr., 2023) CMR, like echocardiography, shows biventricular dysfunction, reduced strain parameters, dilatation of LV and LA. The parameter that is limited to resonance is myocardial edema that presents itself in elevation of T2 signal intensity ratio and T1 and T2 relaxation times. They tend to be altered in PPCM (T2 signal intensity ratio: 2.10 ± 0.34 vs. 1.58 ± 0.21, $p < 0.001$; T1: 1070 ± 51 ms vs. 980 ± 28 ms, $p = 0.001$; T2: 63 ± 5 ms vs. 53 ± 2 ms, $p < 0.001$). Edema can also increase muscle thickness and mass of the heart due to fluid retention in swollen myocytes that in follow up imaging might disappear. (Isaak et al., 2022) Important to mention is that remodeling with myocardial hypertrophy is normal in pregnancy, but with absence of edema or diffuse fibrosis. (Nii et al., 2018) Varying on studies edema is present in 26-59% (Haghikia et al., 2015; Isaak et al., 2022) the difference might be due to the time of disease the imaging was taken. The first acute stage is reflected in visual myocardial edema that might be reversible, so it may be a sign of a better prognosis as in different cardiomyopathies. (Isaak et al., 2022) Next the ECV, that shows volume of cell-free heart tissue, rises and myocardial fibrosis occurs. The ECV mentioned occurs significantly higher in PPCM than in control groups ($33.9 \pm 5.2\%$ vs. $27.1 \pm 3.1\%$, $P < 0.001$). Those values are negatively correlated with LVEF and associated with poor ventricular recovery at cut off at 32.5% (p 0.032, AUC 0,83) (Liang et al., 2020) Koczo et al confirmed that patients with greater ECV experienced clinical adverse outcomes. (Koczo et al., 2024)

Two studies showed a high number of LGE 71% and 80%, but most showed the numbers between 5-58%. (Arora et al., 2014; Demir et al., 2022; Du Plessis et al., 2025; Haghikia et al., 2015; Hoevelmann et al., 2025; Isaak et al., 2022; Liang et al., 2020; Petryka-Mazurkiewicz et al., 2021; Schelbert et al., 2017) Interestingly most of these changes were predominant in anteroseptal and basal to midventricular regions, the patterns contain linear mid-wall that is the most frequent, followed by subepicardial, and right ventricular side of the septum. (Du Plessis et al., 2025) The presence of LGE is associated with poor recovery ($P<0.001$). (Xu et al., 2023) It also appears to have association with dilatation, more severe LV dysfunction as well as left atriums. (Petryka-Mazurkiewicz et al., 2021; Xu et al., 2023) Arrhythmias seems to be seen more often in those with LGE. (Demir et al., 2022; Du Plessis et al., 2025) Based on presence and LGE extent prognostic nomogram was introduced for risk stratification and was shown to be accurate, demonstrating moderate discrimination (C-index 0.8) (95% CI: 0.6-0.9) for associating for 1- to 3-year event-free rate. Extensive myocardial injury, including necrosis or fibrosis, can lead to progression of heart dysfunction. (Xu et al., 2023) Resonance, contrary to echocardiography, has higher accuracy in assessment of RV measurements and function, because of its complexity in shape. As in ECHO reduced RV function is a significant factor of all-cause mortality and poorer LVEF outcomes (Haghikia et al., 2015; Petryka-Mazurkiewicz et al., 2021) Resonance imaging in PPCM seems notably important for understanding the extent of tissue injury, better view on heart function and volumetry. At follow ups conducted after 7 years most women recovered, although CMR showed subtle diastolic dysfunction of the left ventricle and reduced peak VO2. Focal myocardial fibrosis was rather uncommon. (Ersbøll et al., 2018)

4. Summary and Conclusion

It is important for physicians, particularly obstetricians, to be aware of the symptoms and the value of imaging in diagnosing PPCM. Early recognition of this condition may facilitate differentiation from healthy women and enable more timely diagnosis. Awareness of abnormalities in imaging can minimize delays in initiating treatment; moreover, their prognostic value may help identify patients who require transfer to tertiary care centers.

The data gathered in this review shows that ECG abnormalities are present in 96% of the cases, although not in all cases. For the detection of PPCM the most useful are HR and ST changes that are used in AI programs to help in detection. Increased risk of poor outcomes are represented in ECG as mentioned increased HR and ST elevations, but also prolonged QTc, inverted T in aVR, left atrial abnormality and QRS fragmentation. On the other hand, normal ECG correlates with better prognosis. Echocardiography also provides probable prognostic information. Parameters that point to worse outcomes are LVEF <30%, biventricular dysfunction, LVEED >56-60mm, significant MR, dysfunction of RV and intracardiac thrombus. Based on those and with addition of symptoms risk stratifications are being proposed. CMR is better in conducting RV measurements than echocardiography, so it might be more precise in assessing volumetry. Moreover, resonance allows us to see tissue structure and evaluate the presence of ECV or LGE that are associated with adverse outcomes.

Conducted studies do not always agree on percentages and correlations. It may restrict the ability to draw definitive conclusions or generalize to a broader population. It is important to pursue more extensive research with prospective, multicenter registry on women with PPCM undergoing all the imaging techniques. It would enhance knowledge on early diagnostic means and prognosis to potentially reduce maternal mortality.

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