VII CONGRESSO CATARINENSE DE OBSTETRÍCIA E GINECOLOGIA

II Congresso Catarinense de Perinatologia

25 a 27 de junho de 2015 | Expoville | Joinville | SC

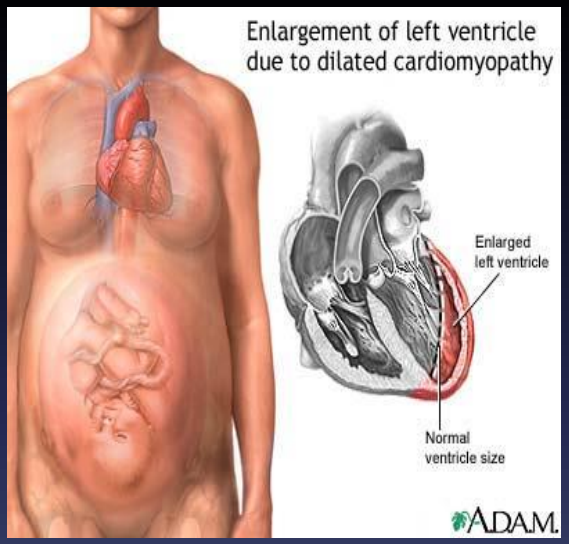
Conrado Roberto Hoffmann Filho

Declaração de conflito de interesse

Não recebi qualquer forma de pagamento ou auxílio financeiro de entidade pública ou privada para pesquisa ou desenvolvimento de método diagnóstico ou terapêutico ou ainda, tenho qualquer relação comercial com a indústria farmacêutica

Cardiomiopatia periparto

- diagnóstico, manejo e repercussões maternas e fetais



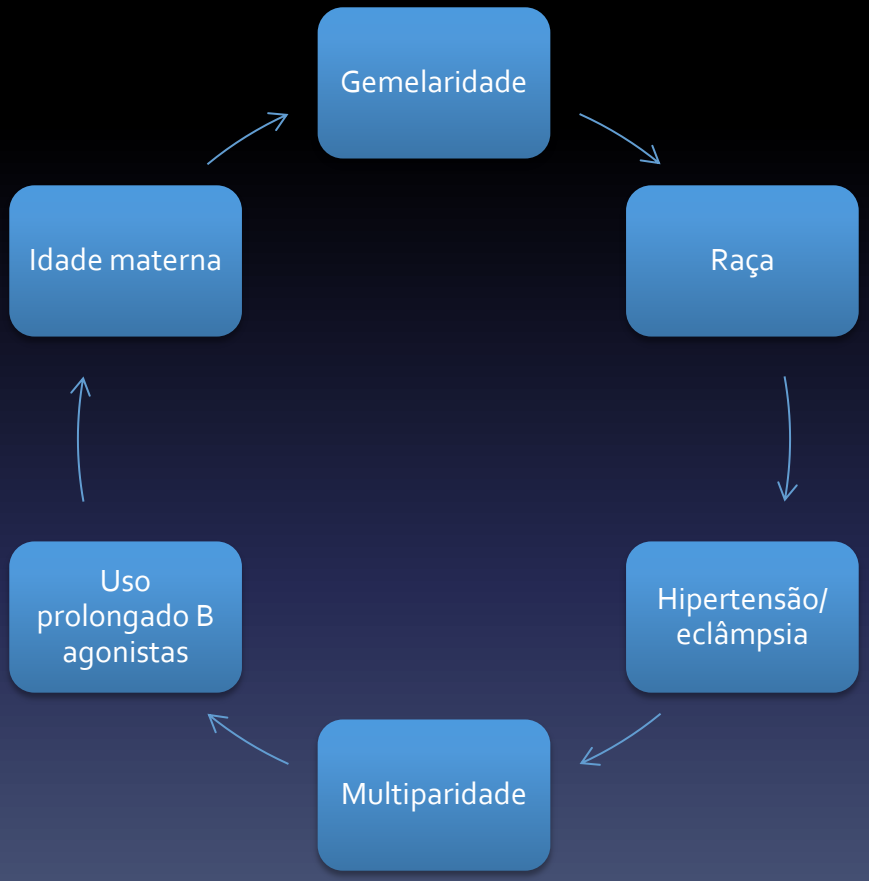
Declaro não apresentar conflito de interêsses

Definição

Miocardiopatia idiopática, com quadro de insuficiência cardíaca, que se apresenta entre o último mês de gestação e até o quinto mês pós parto, sem outras causas de ICC encontradas, apresentando fração de ejeção reduzida, usualmente < 45%. Diagnóstico de exclusão.

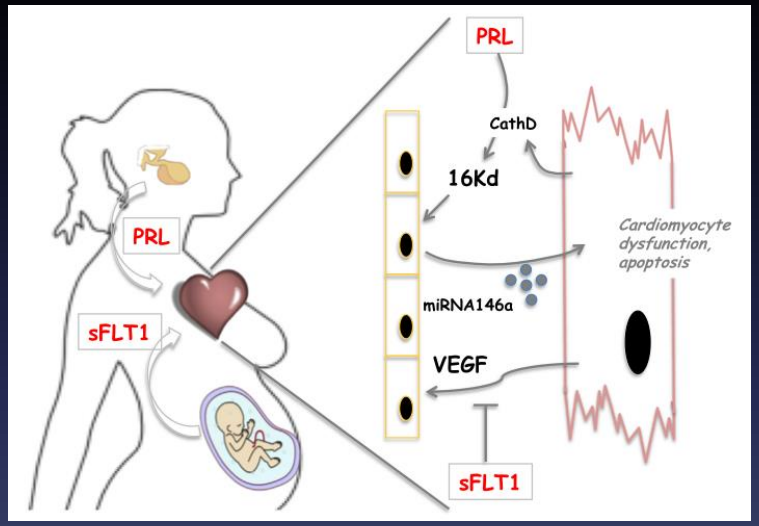
Heart Failure Association of the ESC Working Group on PPCM **(Sliwa *et al.*, 2010)**

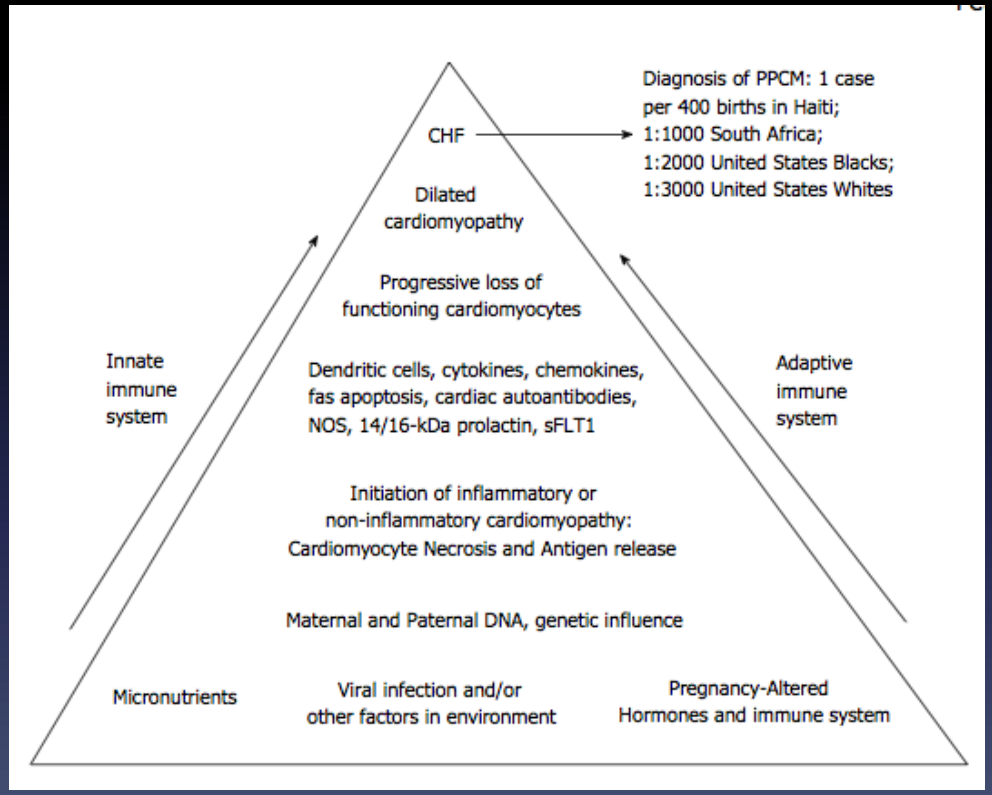
Epidemiologia: Fatores predisponentes



EURObservational Research Programme: a worldwide registry on peripartum cardiomyopathy (PPCM) European Journal of Heart Failure (2014) 16, 583–591

Epidemiologia: Etiologia

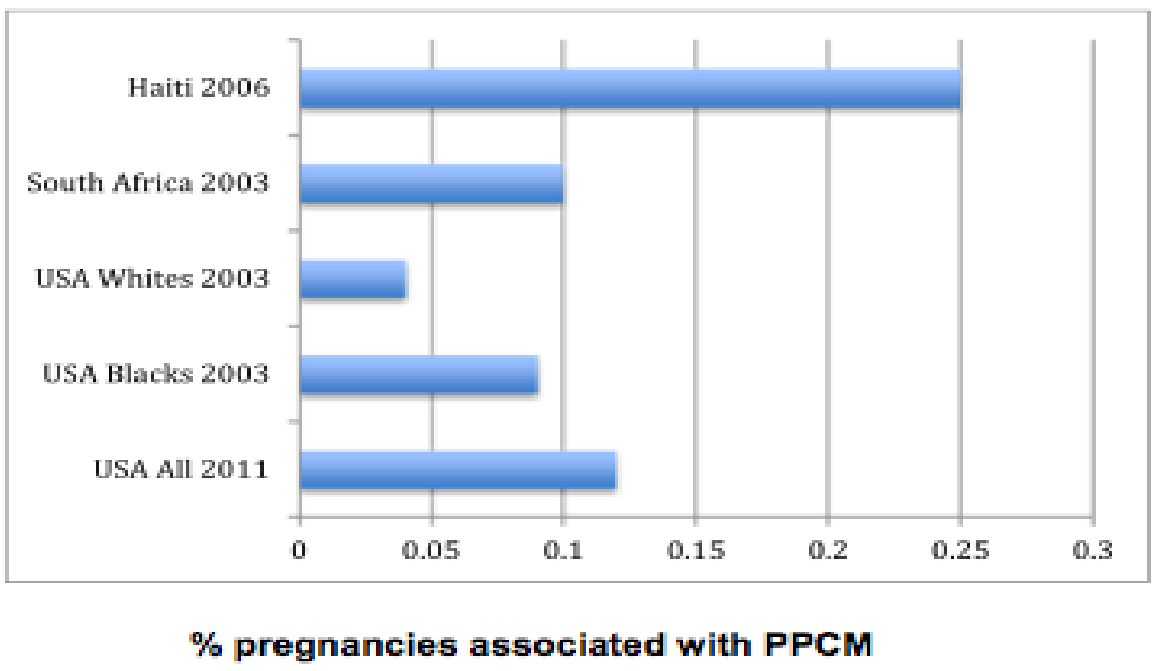




Natalie A. Bello and Zoltan Arany Molecular mechanisms of peripartum cardiomyopathy: A vascular/hormonal hypothesis. Trends in cardiovascular medicine (2015

Fett JD. Peripartum cardiomyopathy: A puzzle closer to solution. *World J Cardiol* 2014; 6(3): 87-99

Incidência



60% iniciam 2 meses pós parto
7% no último trimestre de gravidez

James D. Fett and David W. Markham Discoveries in peripartum cardiomyopathy. Trends in cardiovascular medicine (2014)

Diagnóstico

Apresentação clínica habitualmente não reconhecida pela confusão dos sintomas da gravidez serem semelhantes ao da IC

Na ausência de sintomas cardíacos observar o crescimento fetal

James D. Fett and David W. Markham Discoveries in peripartum cardiomyopathy. Trends in cardiovascular medicine (2014)

Diagnóstico

Sintomas

Dispneia
Ortopneia
DPN
Tosse
Dor toracica
Palpitações
Dor abdominal

- Sinais

- Crepitações
- Edema
- Ritmo de galope
- Sopro holosistólico

Manifestação tromboembólica

James D. Fett and David W. Markham Discoveries in peripartum cardiomyopathy. Trends in cardiovascular medicine (2014)

Diagnóstico

Auto teste para diagnóstico de miocardiopatia periparto

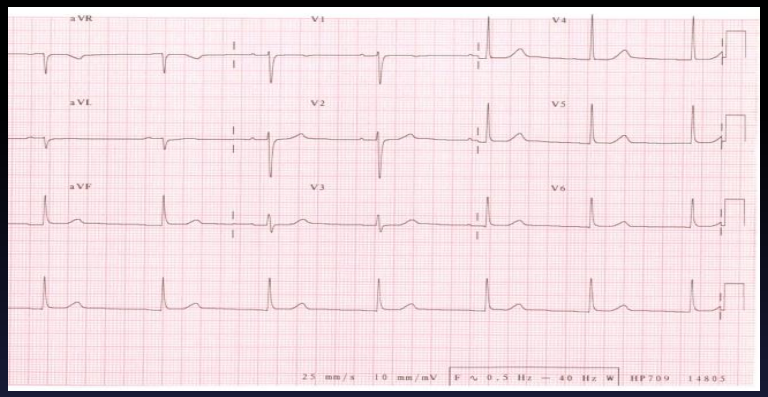
Self-test for early diagnosis of HF in peripartum cardiomyopathy

Symptom	Severity		
Orthopnea (difficulty breathing when lying flat)	None	Need to elevate head	Need to elevate ≥45°
	0 points	1 point	2 points
Dyspnea (shortness of breath on exertion)	None	Climbing ≥8 steps	Walking on level
	0 points	1 point	2 points
Unexplained cough	None	At night	Day and night
	0 points	1 point	2 points
Swelling (pitting edema) lower extremities	None	Below knee	Above and below knee
	0 points	1 point	2 points
Excessive weight gain during last month of pregnancy	<2 lb per week	2-4 lb per week	>4 lb per week
	0 points	1 point	2 points
Palpitations (sensation of irregular heartbeats)	None	When lying down at night	Day and night, any position
	0 points	1 point	2 points

Total score greater than 4 points suggests a need for further evaluation.

Fett JD. Validation of a self-test for early diagnosis of heart failure in peripartum cardiomyopathy. Crit Pathw Cardiol 2011;10:44–5

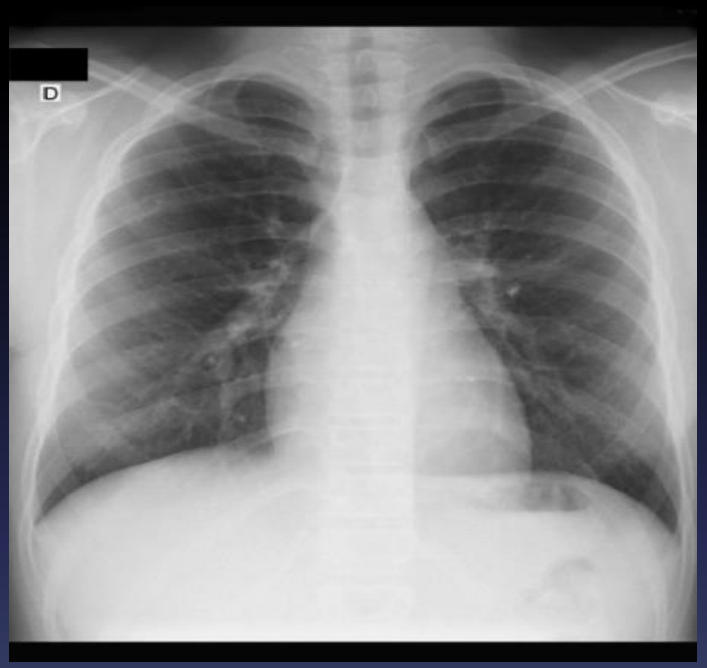
Diagnóstico



Alterações inspecíficas de ST e T

Arritmias atriais e ventriculares

Distúrbios de condução



Sem cardiomegalia

Congestão venosa e edema pulmonar

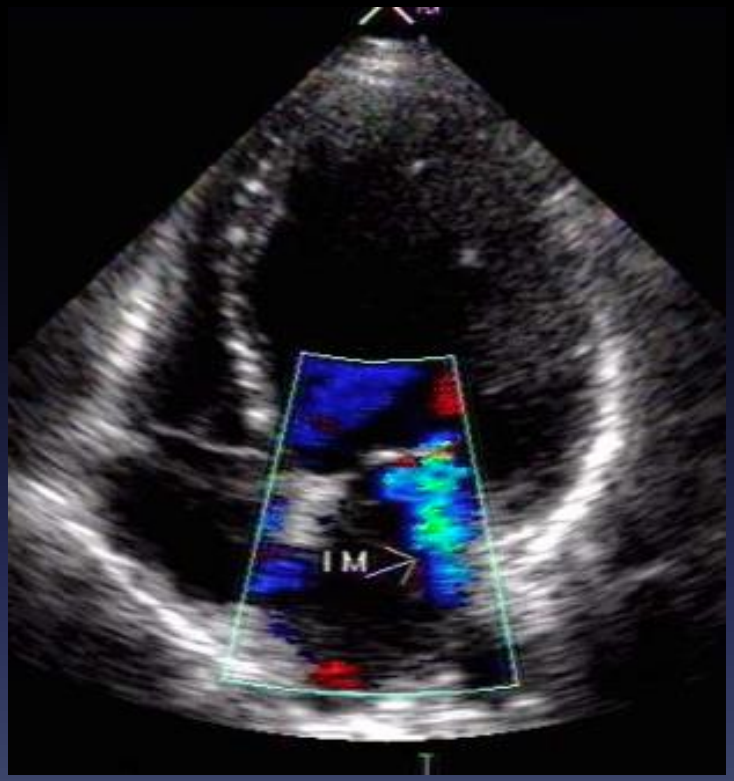
TibazarwaK,LeeG,MayosiB,CarringtonM,StewartS,SliwaK.The12-leadECGin peripartum cardiomyopathy. Cardiovasc J Afr 2012;23:1 – 8

Miocardioptia periparto: Diagnóstico

Aumento das 4 camaras, com diminuição importante da função do VE

Regurgitações mitral, tricúspide e pulmonar

Fração de ejeção, débito cardíaco e movimentação das paredes diminuidos



3. Sliwa K, Fett J, Elkayam U. Peripartum cardiomyopathy. Lancet 2006;368:687 – 693

Diagnóstico

Table I Overview of biomarkers analysed in peripartum cardiomyopathy patients

Biomarker	Relevance for PPCM
NT-proBNP	Not specific for PPCM, but good sensitivity for heart failure.[23,39]
16-kDa Prolactin	Pathophysiological factor of PPCM, high technical effort for measurement, diagnostic accuracy needs to be evaluated.[37,42]
Interferon-γ	Elevated plasma levels in PPCM patients, diagnostic accuracy needs to be evaluated.[9,49]
Asymmetric Dimethylarginine (ADMA)	Marker for endothelial dysfunction and cardiovascular risk, diagnostic accuracy needs to be evaluated.[23]
Cathepsin D	Activity elevated in plasma of PPCM patients, diagnostic accuracy needs to be further evaluated.[23,37]
Soluble fms-like tyrosine kinase-1 (sFlt-1)	Elevated plasma levels in PPCM patients, diagnostic accuracy needs to be further evaluated.[33]
microRNA-146a	Pathophysiological factor of PPCM, high technical effort for measurement, diagnostic accuracy needs to be further evaluated.[23,38]

BNP

Peripartum cardiomyopathy: current management and future perspectives Denise Hilfiker-Kleiner European Heart Journal (2015) 36, 1090–1097

Miocardiopatia periparto Tratamento

Cardiologista

Obstetra de alto risco

Anestesiologista

Neonatologista

Peripartum cardiomyopathy: current management and future perspectives Denise Hilfiker-Kleiner European Heart Journal (2015) 36, 1090–1097

Miocardiopatia periparto Tratamento

Tratamento vigoroso da ICC

Não farmacológico
Restrição de água e sal

Farmacológico
Redução pré carga (nitratos, diuréticos)
Redução pós carga (nitratos, amlodipina. Hidralazina)
Inotrópicos (dopamina. dobutamina. digoxina)
Beta bloqueadores
Anticoagulação

Deambulação precoce

Peripartum cardiomyopathy: current management and future perspectives Denise Hilfiker-Kleiner European Heart Journal (2015) 36, 1090–1097

Miocardiopatia periparto Tratamento

Drug	Safety during lactation[a]	Absence of complete recovery	Complete and sustained recovery of left-ventricular structure and function (echocardiographic follow-up every 6 months)			
			6 months	6–12 months	>12 months	>18 months
β-Blocker	Bradycardia of t… newborn rep… in rare cases. Metoprolol i… best-studied… β-blocker du… lactation.	Complete and sustained recovery of left-ventricular structure and function (echocardiographic follow-up every 6 months)				Discontinue β-blockade, ensure echocardiographic follow-up
		6 months	6–12 months	>12 months	>18 months	
		Continue all drugs for at least 6 months after full recovery to avoid relapse	Continue β-blocker and ACE-inhibitor/ ARB for at least 6 months after stopping MRA	Continue β-blocker for at least 6 months after stopping ACE-inhibitor/ ARB	Discontinue β-blockade, ensure echocardiographic follow-up	
ACE-inhibitor	Low transfer of enalapril and captopril int… breast milk.					Reduce dosage and then discontinue ACE-inhibitor/ARB
ARB	Very limited da… ARB during lactation and be avoided.			Reduce dosage and then discontinue ACE-inhibitor/ARB		
		ACE-inhibition. Up-titration to standard or maximally tolerated dosages.				

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Miocardiopatia periparto Tratamento

Drug	Safety during lactation[a]	Absence of complete recovery	Complete and sustained recovery of left-ventricular structure and function (echocardiographic follow-up every 6 months)			
			6 months	6–12 months	>12 months	>18 months
MRA	Very limited data on MRA during lactation and should be avoided	Recommended for all patients with LVEF < 40%. Eplerenone may be considered due to less hormonal side effects.		Discontinue only if complete and sustained recovery of left-ventricular structure and function		
Ivabradine	No data on ivabradine during lactation available and should be avoided.	For patients with heart rate >75/min, when β-blocker up-titration is not possible. Should be tapered when β-blocker up-titration is possible and/or heart rate is < 60/min	Continue when heart rate is >75/min despite β-blocker up-titration	Discontinue only if complete and sustained recovery of left-ventricular structure and function		
Diuretics	Thiazides are the best-studied diuretics during lactation and well tolerated. They may decrease milk production. Very limited data on furosemide and	Only when oedema/ congestion is present. Early tapering of dose according to symptoms, even before full recovery of left-ventricular function	Continue only when symptoms (congestion/oedema) are present without diuretic therapy as part of an antihypertensive drug therapy			

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Miocardiopatia periparto Tratamento

Ressicronização cardíaca

Cardiodesfibrilador

Assistência ventricular esquerda

Transplante cardíaco

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Miocardiopatia periparto Tratamento

Pentoxifilina 22

Rationale and design of a randomized, controlled multicentre clinical trial to evaluate the effect of bromocriptine on left ventricular function in women with peripartum cardiomyopathy

Em andamento

Arash Haghikia[1] · Edith Podewski[1] · Dominik Berliner[1] · Kristina Sonnenschein[1] · Dieter Fischer[2] · Christiane E. Angermann[3] · Michael Böhm[4] · Philipp Röntgen[1] · Johann Bauersachs[1] · Denise Hilfiker-Kleiner[1]

Effect of levosimend[illegible]nd predictors [illegible]ecovery in patients with peripartum car[illegible]thy [illegible]nized clinical trial

Murat Biteker · Nilüfer Ekşi Duran · [illegible] Gündüz · Halil İbrahim Tanboğa · Tayyar [illegible]okhan K[illegible] · Taylan Akgün · Mustafa Yıldız · [illegible] Ozkan

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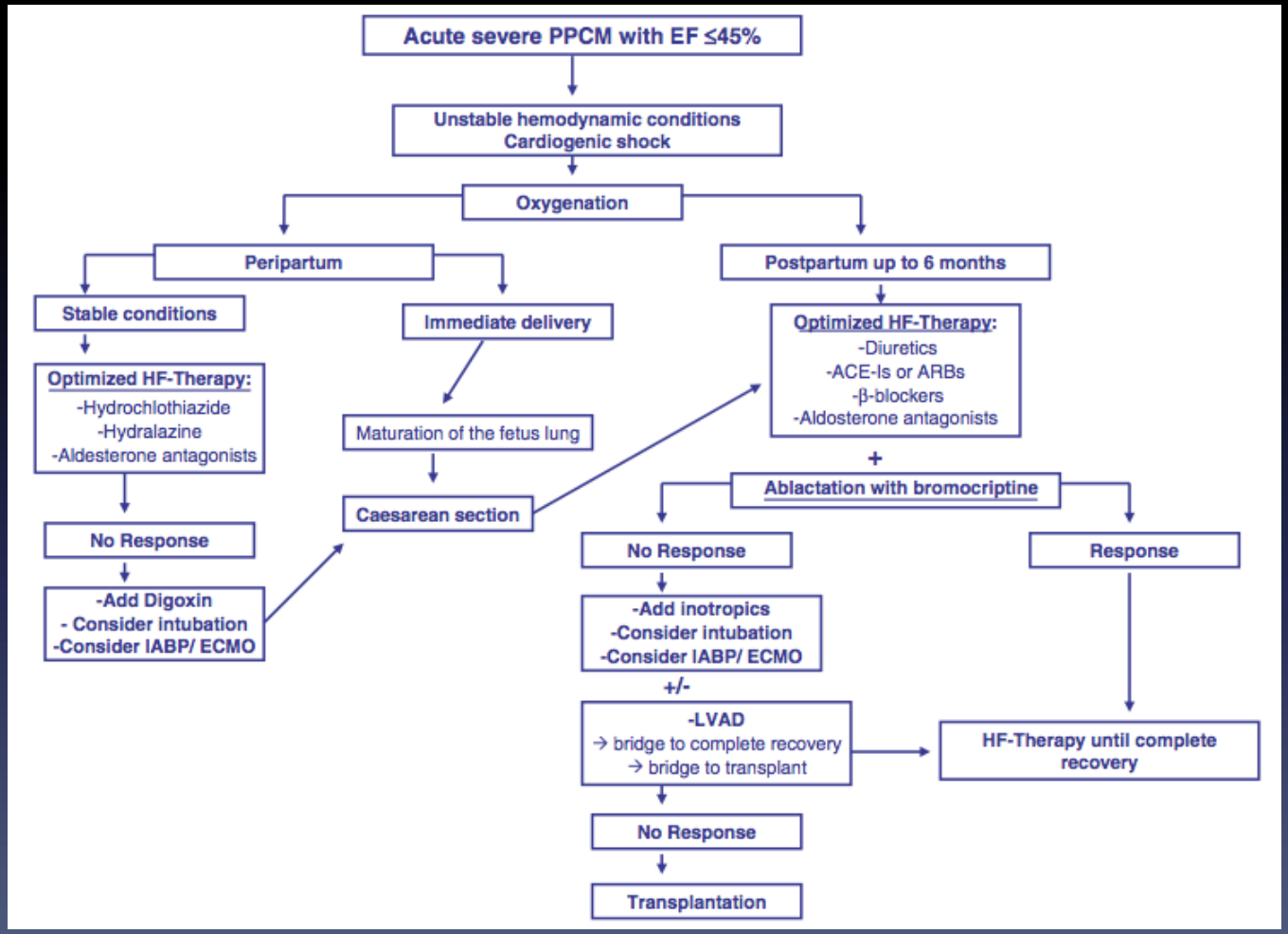
Algoritmo terapêutico para miocardiopatia periparto aguda severa



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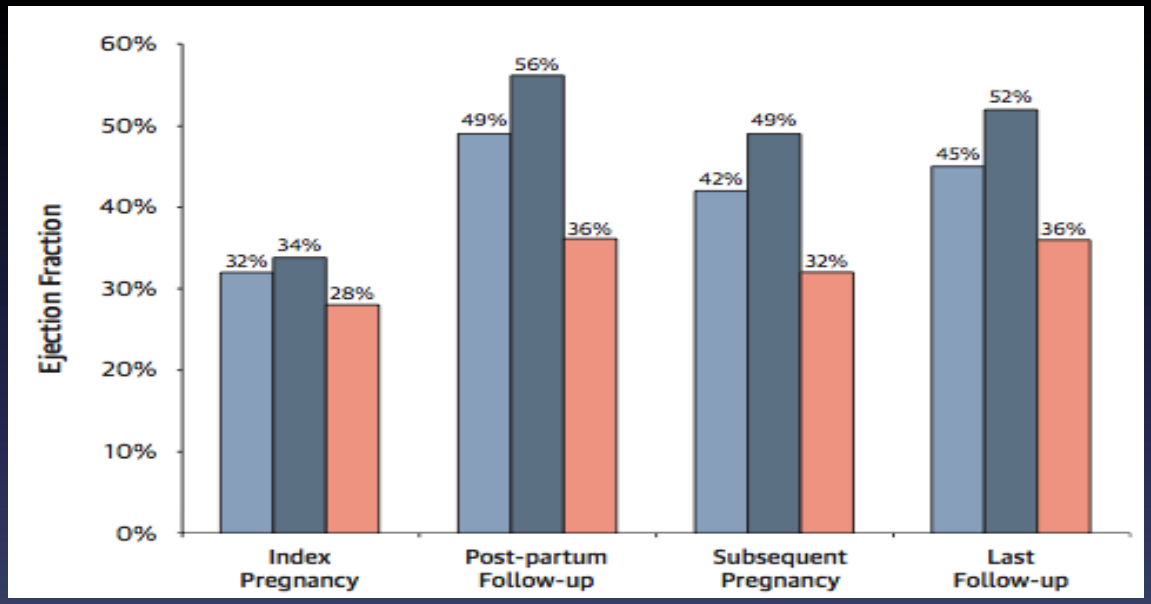
Miocardiopatia periparto evolução

Fração de ejeção



Todos

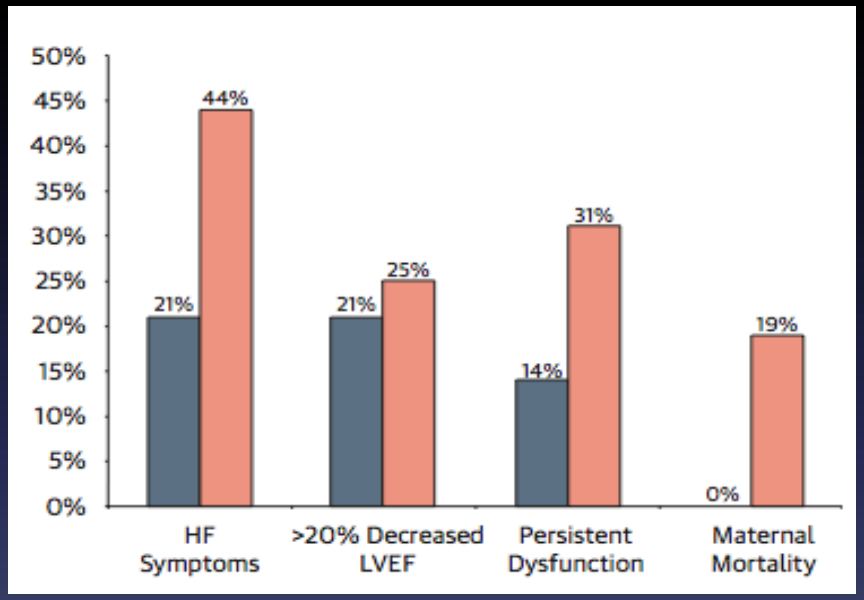
FE >50%

FE <50%

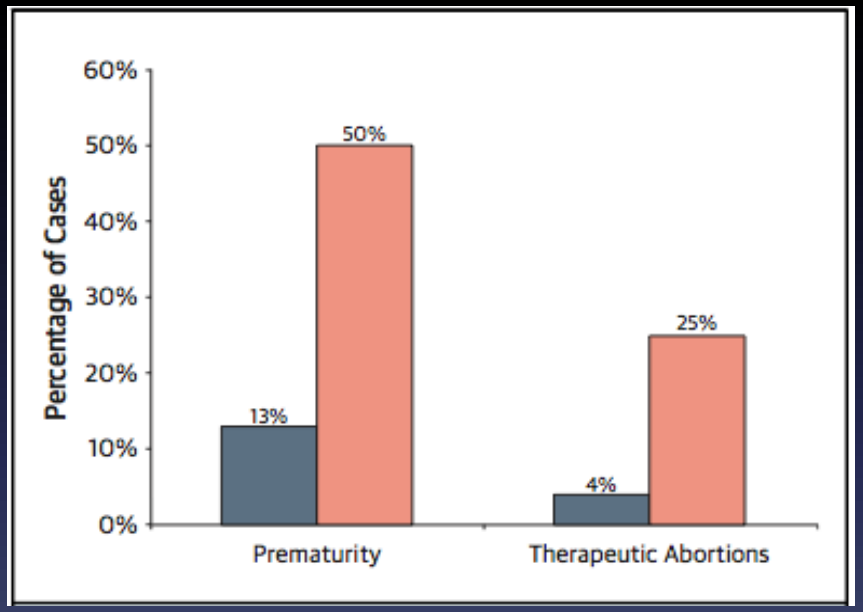
Elkayam Pregnancy Risk After Peripartum Cardiomyopathy (J Am Coll Cardiol 2014;64:1629–36

Miocardiopatia periparto evolução

Complicações maternas



Complicações fetais



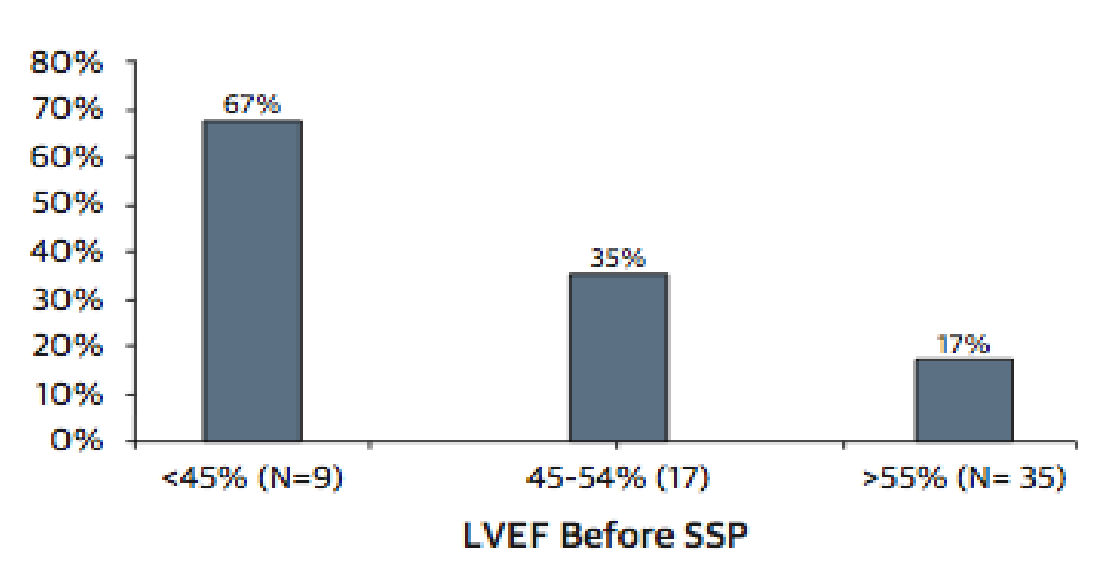
FE >50%

FE <50%

Elkayam Pregnancy Risk After Peripartum Cardiomyopathy (J Am Coll Cardiol 2014;64:1629–36

Miocardiopatia periparto evolução

Recorrência



Elkayam Pregnancy Risk After Peripartum Cardiomyopathy (J Am Coll Cardiol 2014;64:1629–36

Miocardiopatia Gravidez subsequente

TABLE 1 Outcome of Subsequent Pregnancy in Women With a History of Peripartum Cardiomyopathy: Results of a Survey

	Maternal Outcome			Fetal Outcome		
Group	No Relapse	Relapse	Death	Live Birth	Abortions	Stillbirth
Group A	74.4%	23.3%	2.3%	93%	4.7%	2.3%
Group B	37.5%	54.2%	8.3%	83.3%	16.7%	0%

Values are %. Modified with permission from Ostrzega and Elkayam (9).

Group A = women with recovered left ventricular function; Group B = women with persistent left ventricular dysfunction.

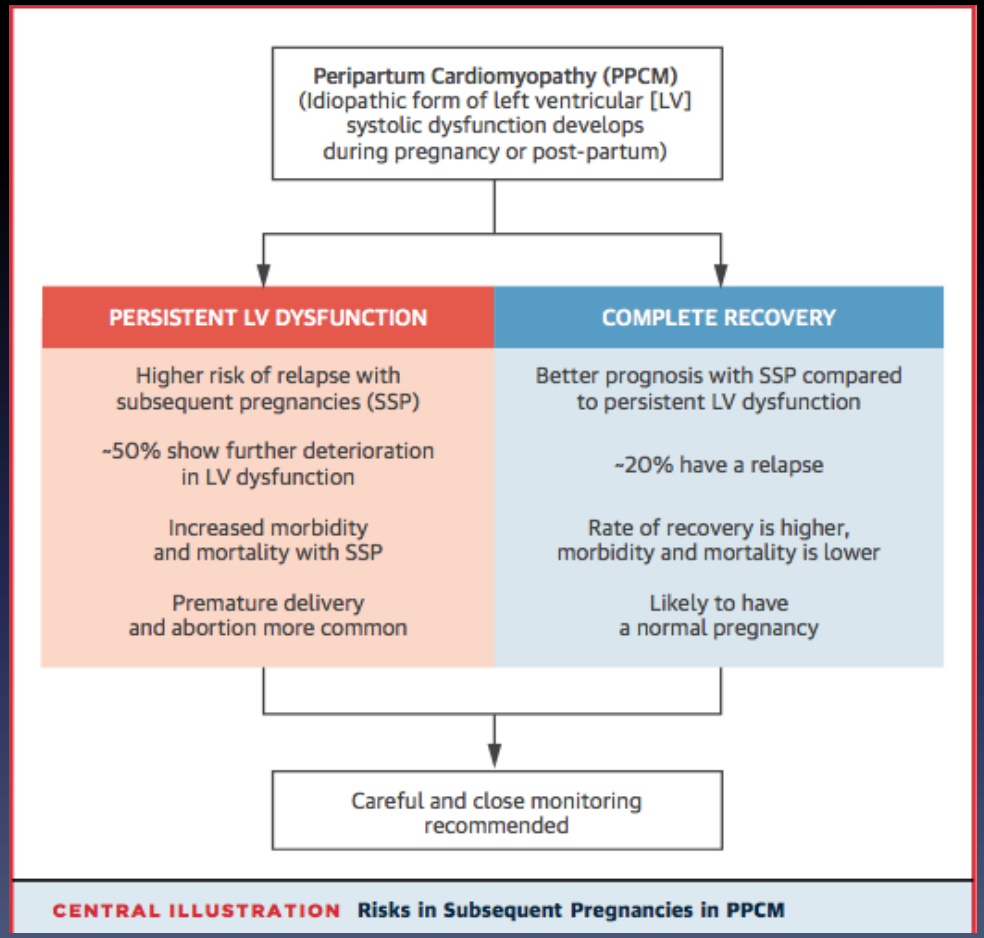
Elkayam Pregnancy Risk After Peripartum Cardiomyopathy (J Am Coll Cardiol 2014;64:1629–36

Miocardiopatia Gravidez subsequente

Baseline LVEF	(n)	Percentage with relapse heart failure	Country	Outcome comments
<0.45	10	66.7	Haiti [a]	1 death, 7/10 left with worse cardiomyopathy
0.45–0.49	8	37.5	USA [b]	4/8 returned to LVEF pre-subsequent pregnancy
0.50–0.54	6	33.3	USA [b]	5/6 LVEF ≥0.50 last echocardiography
≥0.55	26	23.1	USA [b]	22/26 LVEF ≥0.50 last echocardiography
≥ 0.55+CR	12	0[c]	USA [b]	All LVEF ≥0.50 last echocardiography

Fett J.D. Why Do Some Recovered Peripartum Cardiomyopathy Mothers Experience Heart Failure With a Subsequent Pregnancy? Curr Treat Options Cardio Med (2015) 17:354

Miocardiopatia periparto



Elkayam Pregnancy Risk After Peripartum Cardiomyopathy (J Am Coll Cardiol 2014;64:1629–36

Miocardiopatia periparto e nova gestação

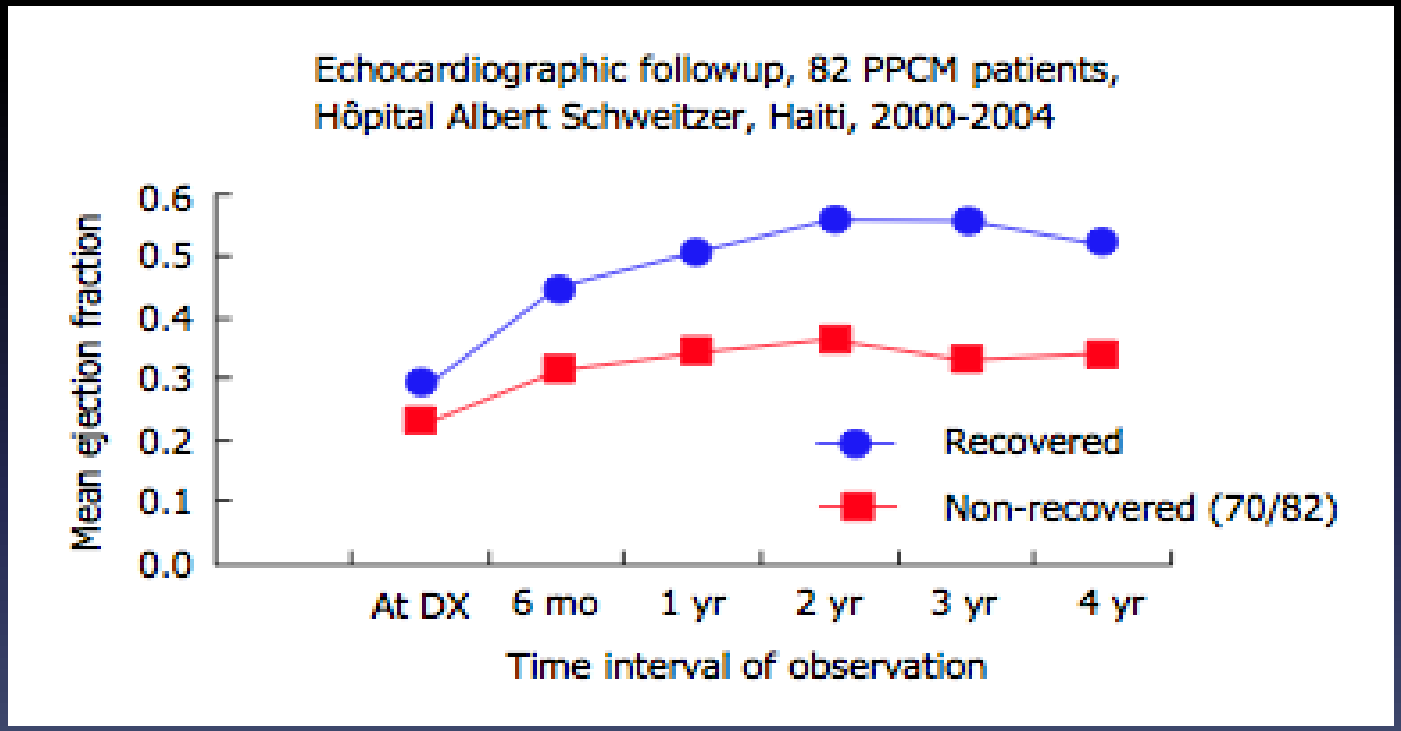
IV	Extremely high risk of maternal mortality or severe morbidity; pregnancy contraindicated. If pregnancy occurs termination should be discussed. If pregnancy continues, care as for class III.
• Pulmonary arterial hypertension of any cause	
• Severe systemic ventricular dysfunction (LVEF <30%, NYHA III–IV)	
• Previous peripartum cardiomyopathy with any residual impairment of left ventricular function	
• Severe mitral stenosis, severe symptomatic aortic stenosis	
• Marfan syndrome with aorta dilated >45 mm • Aortic dilatation >50 mm in aortic disease associated with bicuspid aortic valve	
• Native severe coarctation	

Adapted from Thorne *et al.*[73]
LVEF = left ventricular ejection fraction; NYHA = New York Heart Association; WHO = World Health Organization.

ESC Guidelines on the management of cardiovascular diseases during pregnancy European Heart Journal (2011) 32, 3147–3197

Tedoldi CL, Freire CMV, Bub TF et alArq Bras Cardiol.2009;93(6 supl.1):e110-e178

Prognóstico



Fett JD. Peripartum cardiomyopathy: A puzzle closer to solution. *World J Cardiol* 2014; 6(3): 87-99

Prognóstico

- Dependente da recuperação da FE.
- Recuperação varia entre 23 e 54%.
- Dependente da raça.

EURObservational Research Programme: a worldwide registry on peripartum cardiomyopathy (PPCM) European Journal of Heart Failure (2014) 16, 583–591

Prognóstico

Pacientes que persistem com FE baixa 50% terão recorrência da miocardiopatia

Em pacientes com recuperação da FE 20% terão recidiva da miocardiopatia

Elkayam Pregnancy Risk After Peripartum Cardiomyopathy (J Am Coll Cardiol 2014;64:1629–36

Mensagens para guardar

Sintomas semelhantes a gestações normais

Retardo de crescimento fetal pode auxiliar no diagnóstico

Manutenção do tratamento é essêncial para o prognóstico

Desaconselhamento em relação a novas gestações

Detecção precoce é essêncial para o prognóstico

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Muito Obrigado