

Supplementary Table S1. Previous studies reporting the relationship between maternal inflammatory blood markers and acute histologic chorioamnionitis (acute-HCA) in extra-placental membranes (EPM).

Primary author (year)	Inclusion Criteria (i.e., GAD)	Timing of maternal blood tests	Causes of PTB (N)	N (HCA [-] vs. HCA [+])	Diagnostic criteria for acute-HCA in EPM	Inflammation in the subdivisions of EPM	Inclusion of whole subdivision of EPM	Frequency of inflammation in subdivisions of EPM [%]	Maternal inflammatory blood marker	Correlation between each marker and acute-HCA in EPM		Correlation between each marker and the progression of acute-HCA in EPM	
										No adjustment	Adjustment for GAD	No adjustment	Adjustment for GAD
Kidokoro (2006) [13]	1. Singleton	Delivered <48 h	Threatened	60	Blanc's criteria	Stage I : Intervillositis	N/A	N/A	1. WBC	1. HCA (-) < HCA (+)	N/A	N/A	N/A
	2. GA: 16-35 wks	after maternal	abortion, PTL,	(15 vs. 45)	[43]	Stage II: Chorionitis			2. CRP	2. HCA (-) < HCA (+)			
	3. PTL, Preterm-PROM	blood test	preterm-PROM			Stage III: CAM							
	4. Delivered <48 h after amniocentesis												
Erdemir (2013) [14]	GAD < 35 wks	During labor	N/A	43	Maternal	N/A	N/A	N/A	1. WBC	1. HCA (-) = HCA (+)	N/A	N/A	N/A
				(33 vs. 10)	neutrophils				2. CRP	2. HCA (-) = HCA (+)			
					infiltration into amnion, chorion, and decidua								
Park (2013) [15]	1. 20.0 ≤ GAD <34.5 wks	Delivered <5 d	PTL (53)	53	Modified	Choriodecidualitis	N/A	Chorio-	1. CRP	1. HCA (-) < HCA (+)	N/A	Amnionitis;	Anelevated CRP
	2. PTB due to PTL	after maternal		(7 vs. 42)	Salafia's criteria	Amnionitis		decidualitis:				CRP<0.7 vs.	was predictor for
	3. IAI	blood test			[44]			73.5%,				CRP≥0.7 (mg/dL)	amnionitis.
	4. Delivered <5 d of amniocentesis							Amnionitis: 45.3%				≈7.1% [1/14] ↓ vs. 50.9% [23/39] ↑	
Kim (2014) [16]	1. Singleton	On admission.	PTB (483):	442	MIR:	N/A	N/A	N/A	1. Neutrophil	1. HCA (-) < HCA (+)	N/A	N/A	N/A
	2. PTB due to		PTL (245) vs.	(196 vs.	subchorionitis,				2. Lymphocyte	2. HCA (-) < HCA (+)			
	preterm-PROM or PTL		preterm-PROM	246)	CAM, decidualitis,				3. Monocyte	3. HCA (-) < HCA (+)			
	3. GAD: 24-37 wks		(238)		or free				4. Eosinophil	4. HCA (-) = HCA (+)			
					membranitis				5. Basophil	5. HCA (-) = HCA (+)			
										6. HCA (-) < HCA (+)			
									6. CRP	7. HCA (-) < HCA (+)			
									7. NLR				

Martinez-Portilla (2019) [17]	1. Singleton 2. GAD: 30-35 wks 3. Preterm-PROM	IL-6: at enrollment; WBC: every 72 h	Preterm-PROM (47)	47 (31 vs. 16)	Redline's criteria [6]	Stage 1: Acute subchorionitis or chorionitis Stage 2: ACAM Stage 3: necrotizing CAM	N/A	N/A	1. WBC 2. Leukocytosis 3. Segmented cells 4. IL-6 (pg/mL)	1. HCA (-) = HCA (+) 2. HCA (-) = HCA (+) 3. HCA (-) = HCA (+) 4. HCA (-) < HCA (+)	N/A	N/A	N/A
Howman (2012) [18]	GAD: 24-42 wks	Immediately prior to delivery	N/A * PTB (222)	325 (299 vs. 26)	Redline's criteria [6]	Stage 1: Acute subchorionitis or chorionitis Stage 2: ACAM Stage 3: necrotizing CAM	N/A	Stage 1: 23.1% Stage 2: 34.6% Stage 3: 42.3%	1. hsCRP (mg/L) 2. Procalcitonin	1. HCA (-) < HCA (+) 2. HCA (-) = HCA (+)	N/A	N/A	N/A
Xie (2015) [19]	1. preterm-PROM < 34 wks	At admission and before delivery	Preterm-PROM (371)	371 (110 vs. 261)	N/A	N/A	N/A	N/A	1. CRP 2. WBC	Before delivery HCA (-) < HCA (+) Before delivery HCA (-) = HCA (+)	N/A	N/A	N/A
Kim (2016) [20]	1. Singleton 2. GA 20-34 wks	At amniocentesis	Preterm-PROM (181)	146 (72 vs. 74)	Modified Salafia's criteria [44]	Choriodecidualitis Amnionitis	N/A	N/A	1. WBC 2. CRP	1. HCA (-) < HCA (+) 2. HCA (-) < HCA (+)	N/A	N/A	N/A
Park (2019) [21]	1. PTL 23-34 weeks 2. Delivered <96 h of maternal blood test	Delivered <96 h of blood test	PTL (73)	73 (30 vs. 44)	Modified Salafia's criteria [44]	Choriodecidualitis Amnionitis	N/A	N/A	1. CRP 2. MMP-9 3. TIMP-1 4. IL-6 5. Angiopoietin-2 6. S100 A8/A9 7. CXCL14 8. APRIL 9. IGFBP-2	1. HCA (-) < HCA (+) 2. HCA (-) = HCA (+) 3. HCA (-) = HCA (+) 4. HCA (-) < HCA (+) 5. HCA (-) = HCA (+) 6. HCA (-) < HCA (+) 7. HCA (-) = HCA (+) 8. HCA (-) = HCA (+) 9. HCA (-) < HCA (+)	N/A	N/A	N/A
Hackney (2008) [22]	1. Singleton 2. Before 13 wks of estimated GA	At enrollment	PTB (8) HCA (-) vs. HCA (+) = 8.3% vs. 13.9%	Nested- case control study 72	Redline's criteria [6]	Stage 1: Acute subchorionitis or chorionitis Stage 2: ACAM Stage 3: necrotizing CAM	N/A	Stage 1: 58% Grade 1: 69%	CRP	HCA (-) = HCA (+)	HCA (-) = HCA (+)	N/A	N/A

	3. GAD: HCA (-), 38.3 [34.2-41.2] wks; HCA (+), 38.3 [17-41] wks			(36 vs. 36)									
Wu (2009) [23]	1. Preterm infants: NICU admission 2. GAD: HCA (-), 33.0±2.6 wks; HCA (+), 30.8±4.1 wks	N/A	N/A	77 (50 vs. 27)	Diffuse infiltration or aggregation of PMN leukocytes in chorioamnion plate.	N/A	N/A	N/A	1. WBC 2. Segments 3. Lymphocytes 4. Bands 5. CRP 6. Hb 7. Platelets	1. HCA (-) < HCA (+) 2. HCA (-) = HCA (+) 3. HCA (-) = HCA (+) 4. HCA (-) = HCA (+) 5. HCA (-) = HCA (+) 6. HCA (-) = HCA (+) 7. HCA (-) = HCA (+)	N/A	N/A	N/A
Yamada (2000) [24]	1. Singleton 2. Intact membranes without bleeding 3. GAD, 27-41 wks	N/A	PTL (6)	39 (29 vs. 10)	Blanc's criteria [43]	Stage I: Intervillositis Stage II: Chorionitis Stage III: CAM	N/A	N/A	1. WBC 2. CRP	1. HCA (-) = HCA (+) 2. HCA (-) = HCA (+)	N/A	N/A	N/A
Kurakazu (2019) [25]	1. Singleton 2. PTL 3. suspected intrauterine infection 4. GAD: HCA (-), 34.3±4.3 wks; HCA (+), 29.3±3.7 wks	N/A	PTL (80)	80 (31 vs. 49)	Blanc's criteria [43]	Stage I: Intervillositis Stage II: Chorionitis Stage III: CAM	N/A	N/A	1. WBC 2. CRP	1. HCA (-) < HCA (+) 2. HCA (-) < HCA (+)	N/A	N/A	N/A
Maeda (1997) [26]	1. GAD 22-34 wks	At delivery	PTB (29) = PTL vs Preterm-PROM	29 (11 vs. 18)	Blanc's criteria [45]	Stage I: Intervillositis Stage II: Chorionitis Stage III: CAM	N/A	Stage 1: 5.6% Stage 2: 55.6% Stage 3: 38.9%	1. IL-6 2. IL-8 3. MCAF 4. CRP 5. WBC 6. sIL-6R	1. HCA (-) < HCA (+) 2. HCA (-) = HCA (+) 3. HCA (-) = HCA (+) 4. HCA (-) < HCA (+) 5. HCA (-) = HCA (+) 6. HCA (-) = HCA (+)	N/A	N/A	N/A
Kwak (2015) [27]	1. PTL 2. Preterm-PROM 3. GAD, 34.1±3.7 wks	At admission	PTB (165) = PTL (90) vs. PROM (75)	165 (121 vs. 45)	N/A	N/A	N/A	N/A	1. CRP	1. HCA (-) < HCA (+)	N/A	N/A	N/A

Steinborn (2000) [28]	1. Singleton 2. GAD, 13-36 wks	Delivered <72 h of blood test	PTB (PTL vs.preterm- PROM) 97 (36 vs. 61)	97 (49 vs. 48)	Modified Salafia's criteria [44]	Choriodecidualitis Amnionitis	N/A	N/A	1. ICAM-1 2. WBC 3. CRP	1. HCA (-) < HCA (+) 2. HCA (-) < HCA (+) 3. HCA (-) < HCA (+)	N/A	N/A	N/A
Oh (2011) [29]	1. Singleton 2. PTL or preterm-PROM 2. GA 21-35 wks 3. Delivery <72 h of amniocentesis	At amniocentesis	PTB (99) = PTL (38) vs. preterm-PROM (61)	99 (55 vs. 44)	Modified Salafia's criteria [44]	Choriodecidualitis Amnionitis	N/A	N/A	1. CRP	1. HCA (-) < HCA (+)	N/A	N/A	N/A
Makino (2003) [30]	1. Singleton 2. GAD 24-39 wks	Before delivery	N/A	18 (10 vs. 8)	N/A	N/A	N/A	N/A	1. Total AM 2. Mature AM 3. CRP	1. HCA (-) < HCA (+) 2. HCA (-) < HCA (+) 3. HCA (-) < HCA (+)	N/A	N/A	N/A
Cho (2017) [31]	1. Singleton 2. GA 20-37 wks 3. Preterm-PROM	N/A	Preterm-PROM (149)	149 (87 vs. 62)	N/A	N/A	N/A	Chorionitis: 11.3% Deciduitis: 11.3% Amnionitis + deciduitis: 3.2%	1. Hb 2. Hematocrit 3. Platelet 4. WBC 5. Neutrophil 6. Lymphocyte 7. Monocyte 8. Eosinophil 9. Basophil 10. PT 11. PTT 12. NLR 13. DNI 14. CRP	1. HCA (-) < HCA (+) 2. HCA (-) < HCA (+) 3. HCA (-) = HCA (+) 4. HCA (-) = HCA (+) 5. HCA (-) = HCA (+) 6. HCA (-) < HCA (+) 7. HCA (-) = HCA (+) 8. HCA (-) = HCA (+) 9. HCA (-) = HCA (+) 10. HCA (-) < HCA (+) 11. HCA (-) = HCA (+) 12. HCA (-) < HCA (+) 13. HCA (-) < HCA (+) 14. HCA (-) < HCA (+)	N/A	N/A	N/A
Broumand (2018) [32]	1. GAD, 29 ⁵ -34 ⁶ wks 2. Preterm-PROM	On admission	Preterm-PROM (48)	48 (29 vs. 19)	Leukocyte infiltration with neutrophilic priority on fetal membranes	N/A	N/A	N/A	1. WBC 2. ESR	1. HCA (-) < HCA (+) 2. HCA (-) < HCA (+)	N/A	N/A	N/A

Shimoya (1997) [33]	1. Spontaneous labor at term	At delivery	N/A	103 (81 vs. 22)	Blanc's criteria [45]	Stage I: Intervillositis Stage II: Chorionitis Stage III: CAM	N/A	Stage 1: 72.7% Stage 2: 18.2% Stage 3: 9.1%	1. IL-1 α 2. IL-1 β 3. TNF- α 4. IL-6 5. IL-8	1. HCA (-) = HCA (+) 2. HCA (-) < HCA (+) 3. HCA (-) = HCA (+) 4. HCA (-) = HCA (+) 5. HCA (-) < HCA (+)	N/A	N/A	N/A
Ahmed (2016) [34]	1. Singleton 2. GA 24-34 wks 3. Preterm-PROM	On admission and delivery	Preterm-PROM (60)	60 (24 vs. 36)	Redline's criteria [6]	Stage 1: Acute subchorionitis or chorionitis Stage 2: ACAM Stage 3: necrotizing CAM	N/A	N/A	1. IL-6	1. HCA (-) < HCA (+)	N/A	N/A	N/A
Yoneda (2015) [35]	1. C/S 2. GAD: HCA (-), 37wks [24-41]; HCA (+), 33wks [24-41] 3. Preterm-PROM(-) 4. Failure of trial of labor(-)	In preterm delivery <48 h before C/S, In term <2 wks before C/S	N/A	428 (234 vs. 194)	Blanc's criteria [43]	Stage I: Intervillositis Stage II: Chorionitis Stage III: CAM	N/A	Stage I: 47.4% Stage II: 35.0% Stage III: 17.6%	1. WBC 2. CRP	1. HCA (-) < HCA (+) 2. HCA (-) < HCA (+)	N/A	N/A	N/A
Gulati (2012) [36]	1. GA 24-34 wks 2. Preterm-PROM	On admission, at 48 h, and on day 7 of admission or onset of labor	Preterm-PROM (45)	45 (23 vs. 22)	Leucocytic infiltration in amnion, chorion, umbilical vessels	N/A	N/A	N/A	1. IL-6	1. HCA (-) < HCA (+)	N/A	N/A	N/A
Caloone (2016) [37]	1. Preterm-PROM 2. GA 22-37 wks	Every 48 h during hospitalization and at delivery	Preterm-PROM (295)	295 (169 vs. 126)	Redline's criteria [6]	Stage 1: Acute subchorionitis or chorionitis Stage 2: ACAM Stage 3: necrotizing CAM	N/A	Stage 1: 28.9% Stage 2: 44.4% Stage 3: 26.7%	1. IL-6 2. IL-8 3. HNP 4. TREM-1 5. MMP-8 6. MMP-9 7. ICAM-1 8. CRP	1. HCA (-) < HCA (+) 2. HCA (-) = HCA (+) 3. HCA (-) < HCA (+) 4. HCA (-) = HCA (+) 5. HCA (-) < HCA (+) 6. HCA (-) < HCA (+) 7. HCA (-) = HCA (+) 8. HCA (-) < HCA (+)	N/A	N/A	N/A
Cobo (2012) [38]	1. Singleton 2. GA 23-37 wks	On admission and every day until delivery	Preterm-PROM (107)	107 (46 vs. 61)	Salafia's criteria[46]	Choriodecidualitis Amnionitis	N/A	N/A	1. WBC 2. CRP	1. HCA (-) = HCA (+) 2. HCA (-) < HCA (+)	N/A	N/A	N/A

3. Preterm-PROM													
Gulati (2012) [39]	1. Preterm-PROM	At admission, at	Preterm-PROM (45)	45	Leucocytic	N/A	N/A	N/A	1. IL-6	1. HCA (-) < HCA (+)	N/A	N/A	N/A
	2. GA 24-34 wks	48 h, and on day		(23 vs. 22)	infiltration in								
	3. Singleton	7 of admission or onset of labor			amnion, chorion, umbilical vessels								
Škrablin (2007) [40]	1. PTL	On admission &	PTB (47)	47	Modified	Choriodecidualitis	N/A	N/A	1. IL-6	1. HCA (-) < HCA (+)	N/A	N/A	N/A
	2. Preterm-PROM	active phase of	= PTL (20) vs.	(24 vs. 23)	Salafia's criteria	Amnionitis			2. IL-1β	2. HCA (-) < HCA (+)			
	3. GA 27-33 wks	labor	Preterm-PROM (27)		[44]				3. hsCRP	3. HCA (-) < HCA (+)			
	4. GAD <37 wks												
Ohyama (2002) [41]	1. Singleton	N/A	Preterm-PROM (90)	143	Blanc's criteria	Stage I: Intervillositis	N/A	N/A	1. WBC	1. WBC	N/A	N/A	N/A
	2. GAD 23-32 wks			(53 vs. 90)	[43]	Stage II: Chorionitis				HCA (-) < ACAM (+)			
						Stage III: CAM				HCA (-) < SCAM (+)			
									2. CRP	2. CRP			
										ACAM (+) < SCAM (+)			
										HCA (-) < ACAM (+)			
										HCA (-) < SCAM (+)			
Zou (2004) [42]	1. Singleton	24 h prior to	PROM (55)	55	PMN leukocyte	N/A	N/A	N/A	1. ICAM-1	1. HCA (-) < HCA (+)	N/A	N/A	N/A
		onset of labor		(34 vs. 21)	infiltration of				2. CRP	2. HCA (-) < HCA (+)			
		or C/S			chorionic plate and amnion								

ACAM, acute chorioamnionitis; *AF*, amniotic fluid; *AM*, adrenomedullin; *APRIL*, a proliferation-inducing ligand; *CAM*, chorioamnionitis; *CRP*, C-reactive protein; *C/S*, cesarean section; *CXCL*, C-X-C motif chemokine ligand; *DNI*, delta neutrophil index; *EPM*, extraplacental membranes; *ESR*, erythrocyte sedimentation rate; *GA*, gestational age; *GAA*, gestational age at amniocentesis; *GAD*, gestational age at delivery; *Hb*, hemoglobin; *HCA*, histologic chorioamnionitis; *HNP*, human neutrophil peptides; *IAI*, intra-amniotic inflammation; *ICAM*, intercellular adhesion molecule; *IGFBP*, insulin-like growth factor-binding protein; *IL*, interleukin; *MCAF*, monocyte chemotactic and activating factor; *MIR*, maternal inflammatory response; *MMP*, matrix metalloproteinase; *N/A*, not available; *NICU*, neonatal intensive care unit; *NLR*, neutrophil to lymphocyte ratio; *PMN*, polymorphonuclear neutrophil; *preterm-PROM*, preterm premature rupture of membranes; *PT (INR)*, prothrombin time (international normalized ratio); *PTB*, preterm birth; *PTL*, preterm labor and intact membranes; *PTT (sec)*, partial thromboplastin time (seconds); *S100 A8/A9*, S100 calcium-binding protein A8/A9 complex; *SCAM*, subacute chorioamnionitis; *SD*, standard deviation; *sIL-6R*, soluble IL-6 receptor; *TIMP*, tissue inhibitor of metalloproteinase; *TNF*, tumor necrosis factor; *TREM*, triggering receptor of myeloid cells; *vs.*, versus; *WBC*, white blood cell.