

Appendix 1. Manual vacuum aspiration device used for this study.



Padrón L, Filho JR, Junior JA, Sun SY, Charry RC, Maestá I, et al. Manual compared with electric vacuum aspiration for treatment of molar pregnancy. *Obstet Gynecol* 2018; 131.

The authors provided this information as a supplement to their article.

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Appendix 2. Diagnosis, Staging, and Classification of Gestational Trophoblastic Neoplasia

Diagnosis of postmolar gestational trophoblastic neoplasia:

Rising (more than 10%) hCG ¹ levels for three consecutive weeks or

Plateaued for four weeks or

Histological diagnosis of choriocarcinoma or

Persistence of hCG ¹ level for 6 months or more following uterine evacuation of a molar pregnancy

Anatomic staging:

Stage I: Neoplasia confined to the uterus

Stage II: Neoplasia outside of the uterus, but is limited to the genital structures (adnexa, vagina, broad ligament)

Stage III: Neoplasia extends to the lungs, with or without known genital tract involvement

Stage IV: All other metastatic sites

Modified World Health Organization prognostic scoring system as adapted by the International Federation of Obstetrics and Gynecology ¹⁹:

Prognostic factors	Score			
	0	1	2	4
Age	< 40	≥ 40	-	-
Antecedent gestation	Mole	Abortion	Term	-
Interval months from index pregnancy	< 4	4 - < 7	7 - < 13	≥ 13
Pretreatment serum hCG ¹ (IU/L)	<10 ³	10 ³ - < 10 ⁴	10 ⁴ - < 10 ⁵	≥ 10 ⁵
Largest tumor size (including uterus)	-	3 - < 5	≥ 5	-
Site of metastases	Lung	Spleen, kidney	Gastrointestinal	Liver, brain
Number of metastases	-	1 - 4	5 - 8	> 8
Previous failed chemotherapy	-	-	Single drug	2 or more drugs

1. hCG – human chorionic gonadotropin

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Appendix 3. Analysis of Differences Among the Variables Used as Exclusion Criteria Among the Specialized Services That Comprise the Rio de Janeiro Gestational Trophoblastic Disease Center

Exclusion criteria	Maternity Ward of Santa Casa da Misericórdia do Rio de Janeiro N = 1,470 patients	Maternity School of Rio de Janeiro Federal University N = 123 patients	Antonio Pedro University Hospital of Fluminense Federal University N = 357	p-value*
Sharp curettage	28 (1.9%)	3 (2.4%)	7 (2.0%)	0.831
Discontinued follow-up	66 (4.5%)	6 (4.9%)	15 (4.2%)	0.949
Misoprostol	33 (2.2%)	3 (2.4%)	9 (2.5%)	0.899
Incomplete medical record	41 (2.8%)	3 (2.4%)	9 (2.5%)	0.958

* ANOVA – analysis of variance

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Appendix 4. Risk Factors for Early Complications of Uterine Evacuation Among Patients With Molar Pregnancy Followed at the Rio de Janeiro Gestational Trophoblastic Disease Reference Center

Variables	Uterine perforation			Need for extra postoperative analgesia			Need of blood transfusion			Stay at the hospital ≥ 3 days		
	OR [‡]	aOR [#]	p-value [*]	OR [‡]	aOR [#]	p-value [*]	OR [‡]	aOR [#]	p-value [*]	OR [‡]	aOR [#]	p-value [*]
Age (years)	0.89 (0.67-1.15)	0.99 (0.91-1.07)	0.738	0.96 (0.91-1.10)	1.01 (1-1.03)	0.04	1.12 (0.85-1.19)	1.01 (0.98-1.03)	0.641	0.67 (0.55-1.12)	0.98 (0.95-1.01)	0.119
Parity	1.12 (0.87-1.56)	1.32 (0.93-1.88)	0.119	1.1 (1.06-1.32)	1.12 (1-1.25)	0.061	1.7 (0.85-1.9)	1.03 (0.88-1.2)	0.742	0.99 (0.82-1.31)	1.08 (0.91-1.29)	0.349
Gestational age at diagnosis (weeks)	0.79 (0.67-1.25)	0.89 (0.71-1.11)	0.300	0.98 (0.95-1.12)	1.03 (0.99-1.07)	0.122	1.34 (1.19-1.41)	1.08 (1.03-1.12)	0.001	1.04 (1.01-1.15)	1.07 (1.01-1.12)	0.012
Medical complication												
<i>Bleeding</i>	4.1 (0.46-35.15)	4.56 (0.58-36.08)	0.150	2.89 (2.01-4.44)	3.16 (2.21-4.52)	< 0.001	2.64 (0.90-4.31)	2.64 (0.90-4.31)	0.991	5.12 (2.34-9.81)	5.36 (2.68-10.72)	< 0.001
<i>Anemia</i>	0.98 (0.34-7.82)	1.05 (0.13-8.36)	0.961	24.38 (15.34-35.77)	26.35 (18.2-38.15)	< 0.001	2.8 (1.75-14.65)	3,7 (1.88-15.82)	< 0.001	119.12 (60.43-229.9)	123.64 (66.39-230.26)	< 0.001
<i>Enlarged uterus for gestational age</i>	2.12 (0.61-9.33)	2.34 (0.68-8.13)	0.180	5.68 (4.13-8.42)	6.41 (4.81-8.53)	< 0.001	12.34 (8.13-19.78)	13.23 (8.53-20.52)	< 0.001	15.67 (8.76-25.34)	16.59 (9.33-29.49)	< 0.001

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<i>Theca lutein cysts</i>	1.27 (0.22-6.01)	1.34 (0.28-6.33)	0.715	3.12 (2.78-4.31)	3.48 (2.58-4.69)	< 0.001	6.12 (4.01-8.79)	6.36 (4.45-9.08)	< 0.001	4.89 (3.12-8.53)	5.57 (3.67-8.46)	< 0.001
<i>Preeclampsia</i>	0	0	0.998	3.17 (2.09-7.15)	3.88 (2.13-7.08)	< 0.001	10.31 (5.16-19.51)	11.39 (6.27-20.69)	< 0.001	4.78 (2.31-10.58)	5.66 (2.79-11.48)	< 0.001
<i>Hyperemesis</i>	1.58 (0.39-5.89)	1.72 (0.44-6.67)	0.435	1.02 (0.71-1.38)	1.06 (0.77-1.47)	0.721	1.48 (1.09-2.35)	1.66 (1.14-2.44)	0.009	0.89 (0.49-1.35)	0.95 (0.57-1.58)	0.830
<i>Hyperthyroidism</i>	0	0	0.998	5.91 (2.34-11.47)	5.58 (2.93-10.63)	< 0.001	16.56 (8.79-31.44)	17.51 (9.06-33.85)	< 0.001	6.21 (2.98-12.42)	6.52 (3.08-13.81)	< 0.001
<i>Acute respiratory distress syndrome</i>	3.89 (0.45-31.27)	4.15 (0.52-33.42)	0.181	4.09 (2.11-8.28)	4.67 (2.59-8.43)	< 0.001	10.27 (5.17-18.72)	11.39 (6.27-20.69)	< 0.001	10.64 (5.02-19.13)	11.25 (5.98-21.16)	< 0.001
Preevacuation human chorionic gonadotropin (IU/L)	1 (1-1)	1 (1-1)	0.216	1 (1-1)	1 (1-1)	< 0.001	1 (1-1)	1 (1-1)	< 0.001	1 (1-1)	1 (1-1)	< 0.001
Histology of molar pregnancy (complete versus partial hydatidiform mole)	0	0	0.993	14.66 (7.02-28.81)	15.1 (7.41-30.77)	< 0.001	0.14 (0.03-0.32)	0.1 (0.04-0.22)	< 0.001	0.27 (0.15-0.67)	0.33 (0.18-0.6)	< 0.001
Use of ultrasound to	0	0	0.994	1.87 (1.21-2.67)	2.09 (1.52-	< 0.001	7.23 (3.45-	7.01 (3.82-	< 0.001	2.02 (1.13-	2.17 (1.29-	< 0.001

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monitor the uterine evacuation					2.87)		13.45)	12.88)		3.57)	3.64)	
Use of oxytocin during the uterine evacuation	3.79 (0.45-31.73)	4.40 (0.56-34.84)	0.160	4.38 (2.89-5.76)	4.59 (3.06-6.89)	< 0.001	3.65 (1.87-14.56)	3.89 (1.96-15.78)	< 0.001	3.67 (2.19-6.99)	4.12 (2.18-7.77)	< 0.001
Setting of study												
<i>Maternity Ward of Santa Casa da Misericórdia do Rio de Janeiro</i>	0.68 (0.59-1.98)	0.81 (0.79-2.12)	0.988	1.45 (0.89-2.13)	1.78 (0.91-1.99)	0.893	1.46 (0.89-2.35)	1.89 (0.91-2.23)	0.422	1.43 (0.88-2.78)	1.55 (0.91-2.23)	0.699
<i>Maternity School of Rio de Janeiro Federal University</i>	0.78 (0.65-1.39)	0.90 (0.71-1.49)	0.840	0.96 (0.81-1.75)	1.01 (0.89-1.91)	0.733	1.16 (0.61-1.78)	1.29 (0.89-1.81)	0.846	1.17 (0.79-2.21)	1.34 (0.89-2.01)	0.781
<i>Antonio Pedro University Hospital of Fluminense Federal University</i>	1.15 (0.72-2.56)	1.20 (0.81-2.71)	0.712	0.78 (0.61-1.43)	0.93 (0.81-1.23)	0.828	0.73 (0.55-1.17)	0.89 (0.69-1.23)	0.741	0.73 (0.56-1.32)	0.78 (0.61-1.45)	0.633
MVA ¹ versus EVA ²	0 (0)	0 (0)	0.993	0.65 (0.48-0.81)	0.78 (0.54-0.92)	0.018	0.58 (0.28-0.92)	0.63 (0.44-0.83)	< 0.001	1.09 (0.76-2.09)	1.37 (0.87-2.14)	0.171

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1. MVA – manual vacuum aspiration

2. EVA – electric vacuum aspiration

¥ OR – Crude odds ratio (Confidence Interval of 95%)

aOR – Adjusted odds ratio (Confidence Interval of 95%)

* Wald test for logistic regression adjusted by age, gestational age at diagnosis, medical complication, preevacuation hCG, histology of molar pregnancy, use of ultrasound to monitor the uterine evacuation, use of oxytocin during the uterine evacuation and setting of the study. To account for multiple testing, only raw p-values less than 0.006 are considered statistically significant.

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Appendix 5. Risk Factors for Late Complications of Uterine Evacuation Among Patients With Molar Pregnancy Followed at the Rio de Janeiro Gestational Trophoblastic Disease Reference Center

Variables	Incomplete evacuation			Occurrence of postmolar GTN ³			WHO-FIGO ⁴ Prognostic Risk Score for GTN ³ ≥ 7			Chemotherapy with multiagent regimen for postmolar GTN ³			Occurrence of synechia		
	OR [¥]	aOR [#]	p-value [*]	OR [¥]	aOR [#]	p-value [*]	OR [¥]	aOR [#]	p-value [*]	OR [¥]	aOR [#]	p-value [*]	OR [¥]	aOR [#]	p-value [*]
Age (years)	1.10 (0.91-1.20)	1.01 (0.99-1.02)	0.440	1.12 (1.09-1.23)	1.02 (1.01-1.04)	0.003	1.13 (0.89-1.18)	1.01 (0.95-1.07)	0.767	1.18 (0.98-1.31)	1.11 (0.95-1.23)	0.807	0.91 (0.87-1.11)	0.99 (0.96-1.02)	0.457
Parity	0.98 (0.89-1.19)	1.02 (0.9-1.16)	0.715	1.05 (1-1.19)	1.13 (1.01-1.25)	0.071	1.15 (0.91-1.9)	1.26 (0.94-1.7)	0.116	1.21 (0.87-1.72)	1.32 (0.90-1.9)	0.120	1.17 (1-1.35)	1.21 (1.02-1.43)	0.063
Gestational age at diagnosis (weeks)	0.91 (0.87-1.14)	0.99 (0.95-1.03)	0.522	0.93 (0.88-1.06)	1.05 (0.9-1.09)	0.068	0.81 (0.78-1.19)	0.94 (0.81-1.10)	0.425	0.87 (0.78-1.17)	0.90 (0.80-1.2)	0.541	1 (0.95-1.09)	1.03 (0.97-1.1)	0.308
Medical complication															
<i>Bleeding</i>	2.22 (1.37-3.14)	2.31 (1.65-3.24)	< 0.001	0.97 (0.71-1.26)	1.02 (0.78-1.34)	0.876	1.09 (0.46-2.9)	1.01 (0.38-2.7)	0.988	1.12 (0.43-2.12)	1.21 (0.35-2.9)	0.898	2.01 (1.19-3.98)	2.27 (1.23-4.18)	0.009
<i>Anemia</i>	2.98 (2.09-4.21)	3.03 (2.11-4.36)	< 0.001	1.33 (1-1.97)	1.48 (1-2.2)	0.053	2.09 (0.47-6.31)	1.91 (0.55-6.67)	0.310	1.77 (0.56-6.72)	1.89 (0.50-6.89)	0.420	4.12 (2.74-7.92)	4.83 (2.84-8.22)	< 0.001
<i>Enlarged uterus</i>	1.69	1.73	<	0.63	0.87	0.349	0.93	0.90	0.835	0.84	0.91	0.786	1.65	1.79	0.018

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<i>for gestational age</i>	(1.24-2.41)	(1.31-2.3)	0.001	(0.45-1.12)	(0.66-1.16)		(0.41-2.67)	(0.32-2.52)		(0.34-2.21)	(0.30-2.42)		(1.09-2.78)	(1.1-2.91)	
<i>Theca lutein cysts</i>	2.16 (1.57-2.98)	2.24 (1.63-3.08)	< 0.001	1.01 (0.78-1.44)	1.05 (0.74-1.49)	0.775	1.11 (0.54-3.10)	1.07 (0.31-3.71)	0.918	1.13 (0.37-3.58)	1.27 (0.28-3.98)	0.908	1.89 (1.14-3.36)	1.76 (1-3.08)	0.049
<i>Preeclampsia</i>	1.71 (0.65-3.17)	1.77 (0.87-3.61)	0.114	1.28 (0.81-2.70)	1.49 (0.73-3.02)	0.271	2.23 (0.31-15.51)	2.19 (0.29-16.77)	0.452	2.11 (0.31-15.27)	2.20 (0.25-16.11)	0.452	1.47 (0.67-5.01)	1.69 (0.51-5.57)	0.390
<i>Hyperemesis</i>	1.18 (0.87-1.64)	1.34 (0.97-1.85)	0.074	1.10 (0.72-1.36)	1.17 (0.85-1.59)	0.334	0.77 (0.38-2.43)	0.80 (0.23-2.77)	0.720	0.76 (0.29-2.69)	0.80 (0.20-2.98)	0.611	2.18 (0.87-3.91)	2.31 (0.90-3.82)	0.067
<i>Hyperthyroidism</i>	1.97 (0.95-4.27)	2.02 (0.95-4.32)	0.068	1.17 (0.64-2.38)	1.23 (0.54-2.81)	0.626	2.72 (0.35-20.95)	2.72 (0.35-20.95)	0.337	2.56 (0.41-19.59)	2.90 (0.35-20.95)	0.221	1.98 (0.76-6.71)	2.12 (0.64-7.06)	0.220
<i>Acute respiratory distress syndrome</i>	1.78 (0.91-3.89)	2.01 (0.95-4)	0.066	1.14 (0.75-2.01)	1.3 (0.62-2.71)	0.486	4.21 (0.87-19.40)	4.75 (0.93-21.26)	0.042	4.38 (0.83-20.13)	4.57 (0.92-22.31)	0.049	2.19 (0.78-6.24)	2.34 (0.82-6.7)	0.114
Preevacuation human chorionic gonadotropin (IU/L)	1 (1-1)	1 (1-1)	< 0.001	1 (1-1)	1 (1-1)	0.615	1 (1-1)	1 (1-1)	0.968	1 (1-1)	1 (1-1)	0.834	1 (1-1)	1 (1-1)	< 0.001
Histology of molar pregnancy (complete)	3.93 (3.01-6.17)	4.4 (3.10-6.41)	< 0.001	1.78 (1.12-1.98)	1.36 (1.01-1.84)	0.042	1.93 (0.45-6.78)	2.03 (0.59-7.04)	0.265	1.97 (0.7-6.43)	2.00 (0.60-7.11)	0.355	2.21 (1-19.57)	2.93 (1.07-21.19)	0.001

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versus partial hydatidiform mole)															
Use of ultrasound to monitor the uterine evacuation	2.12 (1.76-3.18)	2.59 (1.92-3.48)	< 0.001	1.34 (0.91-1.83)	1.19 (0.87-1.62)	0.273	1.19 (0.43-3.19)	1.16 (0.38-3.55)	0.792	1.12 (0.49-3.61)	1.19 (0.40-3.89)	0.699	1.54 (1-2.89)	1.79 (1.06-3.02)	0.030
Use of oxytocin during the uterine evacuation	2.83 (2.01-4.1)	2.97 (2.06-4.28)	< 0.001	1.01 (0.83-1.35)	0.96 (0.73-1.26)	0.780	0.81 (0.48-2.71)	0.97 (0.36-2.6)	0.956	0.83 (0.54; 2.23)	0.99 (0.46; 2.5)	0.899	2.51 (1.39-4.78)	2.69 (1.4-5.16)	0.003
Setting of study															
<i>Maternity Ward of Santa Casa da Misericórdia do Rio de Janeiro</i>	0.87 (0.78-1.09)	0.99 (0.91-1.12)	0.899	1.09 (0.74-1.22)	1.12 (0.81-1.29)	0.929	0.75 (0.66-1.32)	0.89 (0.79-1.21)	0.834	0.91 (0.82-1.33)	0.99 (0.78-1.29)	0.981	1 (0.89-1.29)	1.03 (0.81-1.34)	0.794
<i>Maternity School of Rio de Janeiro Federal University</i>	0.66 (0.59-1.1)	0.89 (0.79-1.19)	0.939	1.12 (0.88-1.31)	1.09 (0.78-1.23)	0.899	0.95 (0.71-1.17)	0.90 (0.79-1.19)	0.799	0.79 (0.70-1.28)	0.88 (0.79-1.34)	0.876	0.87 (0.78-1.25)	0.91 (0.84-1.30)	0.781
<i>Antonio Pedro University Hospital of Fluminense Federal</i>	0.90 (0.79-1.09)	0.96 (0.81-1.12)	0.910	1.09 (0.85-1.19)	1.02 (0.81-1.11)	0.911	0.65 (0.59-1.16)	0.78 (0.70-1.19)	0.621	0.77 (0.69-1.31)	0.89 (0.71-1.23)	0.851	0.88 (0.71-1.27)	0.91 (0.81-1.42)	0.997

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<i>University</i>															
MVA ¹ versus EVA ²	0.86 (0.61- 1.23)	0.93 (0.69- 1.27)	0.661	0.91 (0.72- 1.20)	0.81 (0.69- 1.12)	0.065	0.60 (0.35- 2.01)	0.71 (0.23- 2.19)	0.550	0.76 (0.69- 1.25)	0.81 (0.73- 1.28)	0.673	0.19 (0.07- 0.46)	0.21 (0.09- 0.49)	< 0.001

1. MVA – manual vacuum aspiration

2. EVA – electric vacuum aspiration

3. GTN – gestational trophoblastic neoplasia

4. World Health Organization prognostic scoring system as adapted by the International Federation of Gynecology and Obstetrics

¥OR – Crude odds ratio (Confidence Interval of 95%)

#aOR – Adjusted odds ratio (Confidence Interval of 95%)

* Wald test for logistic regression adjusted by age, gestational age at diagnosis, medical complication, preevacuation hCG, histology of molar pregnancy, use of ultrasound to monitor the uterine evacuation, use of oxytocin during the uterine evacuation and setting of the study. To account for multiple testing, only raw p-values less than 0.006 are considered statistically significant.

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