

Decision-making after chorionic villus sampling (CVS): factors associated with pregnancy termination or continuation

D.A. Febres-Cordero, R. Germano Toledo, J. Agudogo, A. Macharia, A. Modest, B. O'Brien, Y. Oyelese
Department of Obstetrics and Gynecology, Beth Israel Deaconess Medical Center, Boston, MA, United States



BACKGROUND

- Chorionic villus sampling (CVS): diagnostic genetic test performed between 10-13 weeks’ gestation
- Provides genetic diagnosis to help inform patients on pregnancy management decisions

OBJECTIVE

- Identify patient and pregnancy characteristics associated with pregnancy termination after CVS

METHODS

- Retrospective cohort study of patients who underwent CVS in 2019-2023
- In multiple gestations, each placenta sampled considered separate CVS procedure, selective reduction examined
- Exclusion: Non-diagnostic CVS, missing post-CVS data
- Outcome: Pregnancy continuation or termination
- Analyses: Chi-square

RESULTS

- 382 patients, 406 CVS procedures performed
- 51% terminated pregnancy after CVS
 - For multiples, 86% were selective reductions
 - Median time to termination 9 days (IQR 6-14)
 - Median gestational age at termination was 14 weeks (IQR 13-15)
- 55% of CVS procedures had a genetic anomaly
 - Significantly higher termination rate in those with genetic anomaly (83%) vs. no genetic anomaly (12%)
 - Trisomy 21 was the most common genetic anomaly present (58%)

CONCLUSION

The presence of genetic anomaly on CVS was associated with a **high proportion of pregnancy termination** with median time to termination of 9 days

Table: Maternal and pregnancy characteristics in those who underwent pregnancy termination versus pregnancy continuation

	N	Termination	Continuation	P-value
Age (years)	382	36 (33–39)	33 (31–36)	<0.01
Nulliparity	163	48	52	0.47
Race				0.85
Asian	38	50	50	
Black or African American	15	47	53	
Hispanic/Latine	16	56	44	
White/European	277	50	50	
Assisted Conception *	45	36	64	0.03
Number of fetuses				0.03
Singleton	346	53	47	
Twins	47	40	60	
>2 Multiples	13	23	77	
Indications for CVS **				
Increased Nuchal Translucency	183	49	51	0.51
Abnormal prenatal screening	145	75	25	<0.01
Advanced maternal age	108	58	42	0.07
Cystic hygroma	68	50	50	0.86
Multiple gestation	55	35	65	<0.01
Known parental carrier trait	51	27	73	<0.01
Other fetal anomalies	43	60	40	0.19
Other	21	14	86	<0.01
Fetal genetic anomaly present	224	83	17	<0.01

Data presented as median (interquartile range) or percent (%)

* Consisted of all forms of assisted reproductive technology (ART) such as medications, intrauterine insemination, and/or in vitro fertilization | ** There may be more than one indication for performing CVS