

EP03.10 CORRELATION OF ULTRASOUND-MEASURED MOLAR VOLUME WITH INTRAOPERATIVE BLOOD LOSS IN HYDATIDIFORM MOLE PATIENTS WHO UNDERWENT SUCTION CURETTAGE

April Candy U. Kong, MD, FPOGS, FPSUOG; Maria Febi B. De Ramos, MD, FPOGS, FPSUOG, FPSSTD



OBJECTIVE

To determine the correlation between ultrasound-measured molar volume and intraoperative blood loss and develop a predictive model for anticipated hemorrhage during suction curettage for hydatidiform mole.

Estimation of the expected blood loss will guide in the appropriate procurement of blood products consequently preventing maternal morbidity and mortality secondary to hemorrhage.

METHOD

This is an 8-year retrospective study of 272 with hydatidiform mole patients who underwent suction curettage at a tertiary government hospital. Clinicodemographic, ultrasound, laboratory and intraoperative data were analyzed. Pearson’s correlation was estimated to determine the relationship between intraoperative blood loss and variables of uterine volume, ultrasound-measured molar volume and baseline serum beta-hCG.

LIMITATION

The retrospective study design limited the study due to biases and inter- observer variability in estimating the ultrasound-measured molar volume and intraoperative blood loss.

RESULT

Among the variables, there is a positive correlation between ultrasound-measured molar volume and intraoperative blood loss ($r=0.65$, $p<0.0001$) in women who underwent suction curettage for hydatidiform mole. Thus, a regression equation was calculated:

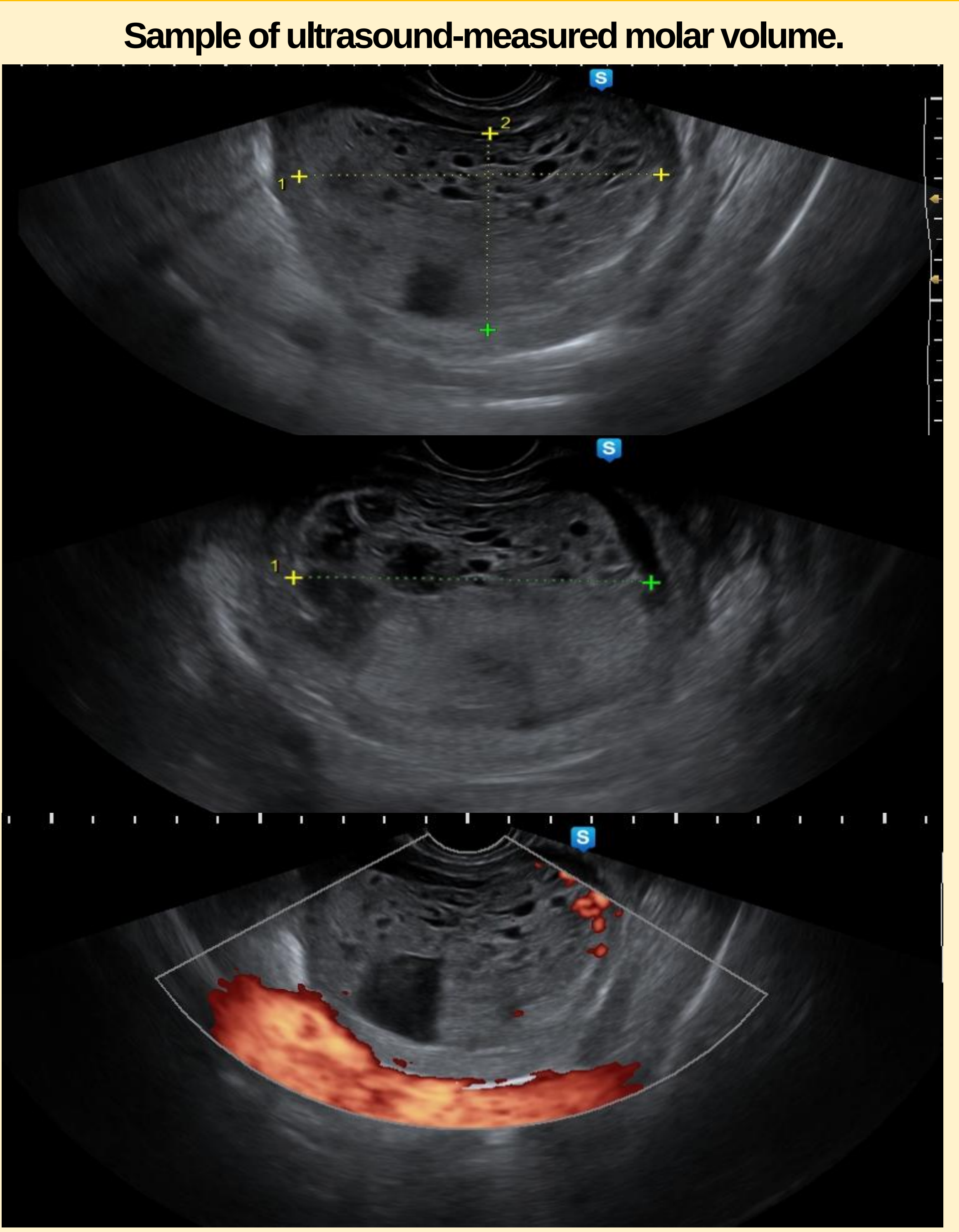
$$\text{ESTIMATED BLOOD LOSS} = 0.92083 \times \text{Ultrasound Measured Molar Volume} + 266.61105$$

Table 1. Correlation in between the uterine volume, ultrasound-measured molar volume, level of serum beta-hCG with the intraoperative blood loss.

Variables	Test statistics	Uterine Volume	Ultrasound-measured molar volume	Serum beta-hCG
Estimated Blood Loss	Pearson r correlation	0.02	0.65	-0.01
	p-value	0.704(NS)	<.0001(S)	0.940(NS)

CONCLUSION

PRE-OPERATIVE ULTRASOUND-MEASURED MOLAR VOLUME MAY HELP PREDICT INTRAOPERATIVE BLOOD LOSS. THE STUDY PROPOSES A PREDICTIVE MODEL FOR ANTICIPATED HEMORRHAGE DURING SUCTION CURETTAGE FOR HYDATIDIFORM MOLE.



REFERENCES: 1. Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, McGraw-Hill; New York, NY, USA: 2014. Williams Obstetrics, 24e. 2. Lurain JR. Gestational trophoblastic disease I: epidemiology, pathology, clinical presentation and diagnosis of gestational trophoblastic disease, and management of hydatidiform mole. American journal of obstetrics and gynecology. 2010 Dec 1;203(6):531-9. 3. Lentz GM, Lobo RA, Gershenson DM, Katz VL. Comprehensive gynecology e-book. Elsevier Health Sciences; 2012 Feb 21. 4. Capito LB, Soriano-Estrella AL, Reyes JP, Bolastig-Canson JA. Gestational trophoblastic disease: The Philippine experience. Philippine Journal of Obstetrics and Gynecology. 2020;1-5. 5. Ngan HY, Seckl MJ, Berkowitz RS, Xiang Y, Golfer F, Sekharan PK, Lurain JR, Massuger L. Diagnosis and management of gestational trophoblastic disease: 2021 update. International Journal of Gynecology & Obstetrics. 2021 Oct;155:86-93. 6. Clinical Practice Guideline for the Diagnosis and Management of Gestational Trophoblastic Diseases. Philippine Society for the Study of Trophoblastic Diseases, Inc. 2022. 7. Newhouse I, Spacey A, Scragg B, Szczepura K. The diagnostic value and accuracy of ultrasound in diagnosing hydatidiform mole: A systematic review and meta-analysis of the literature. Radiography. 2022 Nov 1;28(4):897-905. 8. Norton ME. Callen's Ultrasonography in Obstetrics and Gynecology E-Book: Callen's Ultrasonography in Obstetrics and Gynecology E-Book. Elsevier Health Sciences; 2016 Jul 2. 9. Savage JL, Maturen KE, Mowers EL, Pasque KB, Wasnik AP, Dalton VK, Bell JD. Sonographic diagnosis of partial versus complete molar pregnancy: a reappraisal. Journal of Clinical Ultrasound. 2017 Feb;45(2):72-8. 10. World Health Organization. Trends in maternal mortality 2000 to 2017: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division.11. Macayaon AM, Habana MA, Amorin HR, Anonuevo AU, del Prado JC, Irabon IS, Magno AD, Mangubat ML, Te-Santos HG. POGS 2019 report on obstetrical and gynecological indicators of healthcare. Philipp J Obstet Gynecol. 2020;44:41-8. 12. Noh HK, Jo HN, Lee S, Kwon BS, Suh DS, Kim KH. Complete hydatidiform mole with massive intrauterine hemorrhage in an adolescent girl. 대한산부인과학회 학술발표논문집. 2016;102:482-13. Hou JL, Wan XR, Xiang Y, Qi DW, Yang XY. Changes of clinical features in hydatidiform mole: analysis of 113 cases. J Reprod Med. 2008 Aug;53(8):629-33. PMID: 18773629.14. Villariasa SJ, Estrella, AL. A five-year review of the clinicopathologic profile of patients with hydatidiform mole at the Philippine General Hospital. PJOG November - December 2020; Volume 44, Number 6. 15. Cagayan, M. S. "Hydatidiform mole and its complications: review of patient profiles and management at the University of the Philippines-Philippine General Hospital." The Journal of Reproductive Medicine 59.5-6 (2014): 235-240. 16. De Ramos MB, Bustamante LD, Jacinto EK. The use of uterine artery Doppler studies as predictors for postmolar gestational trophoblastic neoplasia. Philipp J Obstet Gynecol 2023;47:108-20.17. Hcini N, Mchirgui A, Pomar L, Beneteau S, Lambert V, Carles G. Early Prediction of Blood Loss and Postpartum Hemorrhage after Vaginal Delivery by Ultrasound Measurement of Intrauterine Content. Ultrasound in medicine & biology. 2020 Nov 1;46(11):3145-53. 18. Tang S, Zhou Q, Zhang Y, Chen L, Yu X, Zhang Y, Qi Z, Xia Y, Huang Y. Ultrasound measured depth of pelvic free fluid correlates well with blood loss volume in patients with ectopic pregnancy. Emergency Medicine International. 2020 Dec 10;2020.