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Levonorgestrel Release Rates With LNG20, a New Levonorgestrel Intrauterine System [186]

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INTRODUCTION: LNG20, a new levonorgestrel intrauterine system, is currently being investigated in a phase 3 study for contraception. The objective was to evaluate levonorgestrel ex vivo release rate over 3 years of LNG20 use.

METHODS: Levonorgestrel release rate was estimated by comparing the average initial levonorgestrel content and the residual levonorgestrel content of expelled or removed systems. The initial levonorgestrel content analysis was performed on 10 random samples at lot release. The estimated release rate was determined by residual drug content analysis of 74 samples that were removed or expelled during the phase 3 study. Residual drug content analysis was performed on six or more samples in each 90-day interval through 2.5 years and six samples between 2.5 and 3 years. A first-order exponential model was used to determine the average rate of change of levonorgestrel content over time. The best-fit curve for the change in levonorgestrel content over time was used to estimate the release rate at 0, 1, 2, and 3 years.

RESULTS: The average initial levonorgestrel content was 52.0 ± 1.8 mg with an initial release rate of 18.6 micrograms per day. The estimated average release rate at 1, 2, and 3 years of use was 16.3, 14.3, and 12.6 micrograms per day, respectively. The average cumulative release was 6.4, 12.0, and 16.9 mg (12%, 23%, and 33% of the initial loading), respectively.

CONCLUSION: LNG20 releases levonorgestrel at a rate that is comparable with known intrauterine systems containing 52 mg levonorgestrel.

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Are There Economic Influences on Choice for Sterilization by Minority Women in an Inner-City Hospital? [187]

Abraham Haamou, MD
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OBJECTIVE: To identify the socioeconomically disadvantaged women’s choice for sterilization and assess the influence of economic factors on their health care decisions.

METHODS: At a hospital in a poor inner-city community in New York City, data were abstracted from the database on patients who had undergone tubal ligations between January 1, 2007, and December 31, 2012. Data were obtained on women who were sterilized and those who elected to have a pregnancy. The socioeconomically disadvantaged women were compared with the women who were not so disadvantaged.

RESULTS: Of the 3,063 women included in the cohort, 2,048 low risk and 1,015 high risk. The index pregnancy was slightly more likely to be tubal ligations (7.37% in 2011, 5.60% in 2012). The comparison of the economic factors showed a significant difference in the rate of tubal ligations among the two groups. The rate of tubal ligations increased significantly in the economically disadvantaged women (P = 0.004).

CONCLUSION: The economic factors had a significant impact on the decision of sterilization by the economically disadvantaged women.

Are There Economic Influences on Choice for Sterilization by Minority Women in an Inner-City Hospital? [187]

Abraham Haamou, MD
Lincoln Medical and Mental Health Center, Bronx, NY

INTRODUCTION: The study aims to identify the socioeconomically disadvantaged women’s choice for sterilization and assess the influence of economic factors on their health care decisions.

METHODS: Data were abstracted from the hospital database on patients who had undergone tubal ligations between January 1, 2007, and December 31, 2012. Data were obtained on women who were sterilized and those who elected to have a pregnancy. The socioeconomically disadvantaged women were compared with the women who were not so disadvantaged.

RESULTS: The rate of tubal ligations increased significantly in the economically disadvantaged women (P = 0.004).

CONCLUSION: The economic factors had a significant impact on the decision of sterilization by the economically disadvantaged women.

Financial Disclosure: None.

Postpartum Contraceptive Choice Among Patients After High-Risk Pregnancy [185]

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OBJECTIVE: To evaluate the contraceptive choices of patients after high-risk pregnancy.

METHODS: This was a retrospective study of women delivering at a university hospital during 2009–2010 who received prenatal care in the faculty or resident clinics. High-risk status was defined by Society of Maternal-Fetal Medicine guidelines; subject categorizations were agreed on by all authors. Documentation of contraceptive plan was abstracted from clinic and hospital records. Subsequent pregnancies through 2012 were abstracted. χ² tests assessed correlations between risk status and both contraceptive choice and subsequent pregnancy. Binary logistic regression was performed for the outcomes of Tier 1 contraceptive choice at last contact and for subsequent pregnancy during the follow-up period.

RESULTS: Of the 221 women included in the cohort, outcome data were available for 184. Intrauterine device expulsions occurred in 24 patients. Body mass index greater than 35, adenomyosis, and IUD insertion for hyperplasia or early cancer were all individually associated with significantly increased risk of expulsion. Using a multivariate logistic regression model for expulsion, six composite variables (insertion in the operating room, BMI, health care provider level of training, preprocedural use of ibuprofen, abnormal uterine bleeding, and hyperplasia or early cancer as an indication) were found to be the most significant contributors to IUD expulsion. This model was used to develop an expulsion odds risk calculator with a sensitivity of 66.7%, specificity of 83.3%, and 79% accuracy.

CONCLUSION: Risk of IUD expulsion is multifactorial and a combination of health care provider, patient, and technical-related factors can be used to calculate a patient’s individual risk of expulsion. More studies need to be done to validate this model in other populations.

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