

contacted via telephone. An adapted version of the questionnaire regarding post sterilization satisfaction by Rosenfeld BL, et al (3) was used with additional questions about the factors related to the decision making process. Demographic information was analyzed with descriptive statistics.

**Results:** A total of 2,437 records were analyzed of which 771 were adolescents. The results showed that 13 (0.016%) adolescents underwent tubal ligation in the postpartum period. Characteristics of this population at the moment of sterilization are depicted in table 1. Attempts were made to contact the 13 patients by telephone and 2 patients agreed to respond to the questionnaire. Translated excerpts from the interviews are shown in table 2.

**Conclusions:** The majority of adolescent patients who opted for tubal ligation in the present series were unemployed and had a low income and educational level. The combination of these social factors may have played a decisive role when the patients requested the procedure. Although this study was limited by the inability to contact the majority of the patients identified, it represents an initial step to analyze why adolescent patients are undergoing sterilization procedures in Mexico. The promotion of long-acting reversible contraception methods as an effective and reversible contraceptive to postpartum patients may reduce the incidence of sterilization in this population. Further studies are needed to completely assess the situation and develop appropriate interventions.

### 32. Back to the Hospital: Long Acting Contraceptive use and Rapid Repeat Pregnancy in Adolescent Patients



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**Background:** Rapid repeat pregnancy (RRP), defined as pregnancy within two years of an obstetric event, occurs in approximately 35% of pregnant adolescents. (1) Besides being associated with a greater incidence of maternal and neonatal morbidity, RRP exposes adolescent patients and their children to socioeconomic adversity. (2) Previous studies have found that the main risk factors for RRP in adolescent patients are the early resumption of sexual intercourse and not using long-acting reversible contraceptive methods (LARCs). (3) In fact, leaving the hospital after delivery without initiation of any contraceptive method has been correlated to a significant increase in the risk of RRP (4) The objective of this study is to determine whether the initiation of a LARC immediately after the obstetric event decreases the incidence of RRP in adolescent patients.

**Methods:** An observational retrospective cohort study was conducted in a maternity hospital in the northeast of Mexico. Medical records of all adolescent patients (12 - 19 years of age) who received birth care between January and August of 2017 were reviewed. Data regarding the obstetric event and 2 years follow-up were summarized with descriptive statistics. The results are presented as percentages or mean  $\pm$  standard deviation, as indicated. Association between LARC use and RRP was calculated using Pearson's  $\chi^2$  test and statistical significance was determined as  $p < 0.05$ .

**Results:** A total of 356 records were reviewed. Demographic characteristics of the population are depicted in table 1. 15% of the patients presented an RRP during the follow-up period, with the majority of them (60%) having an intrauterine device (IUD) implanted in the immediate post-obstetric event period. Information regarding contraceptive use and rapid repeat pregnancy are depicted in table 2. Association between LARC use and RRP was not significant ( $p = 0.17$ ).

**Conclusions:** RRP represents a major burden for adolescent obstetric patients because it perpetuates the socioeconomic inequality young women confront. Patients should be provided with the option of receiving LARCs in the puerperal period as previous studies have proven them to be the most effective prevention strategy for RRP. In this study, there was no statistical significance for a relationship between LARCs and lower rates RRP. We hypothesize that this phenomenon could be explained by IUD

expulsion after the obstetric event and recommend that further studies are performed to analyze the best method to prevent adolescent RRP.

Age	17.3 $\pm$ 1.3 years
Gestational age at birth	39.4 $\pm$ 1.46 weeks of gestation
Number of gestations	
G1	273 (76%)
G2	76 (21%)
G3	6 (1.6%)
G4	1 (0.2%)
Delivery mode	
Vaginal delivery	273 (76.7%)
C-Section	83 (23.3%)

	Patients who had RRP	Patients who did not had RRP
<b>Total</b>	53 (14.9%)	303 (85.1%)
<b>LARC users</b>		
IUD	34 (64.2%)	222 (73.2%)
Hormonal Implant	32 (94.1%)	204 (91.8%)
Tubal ligation	2 (5.8%)	16 (7.2%)
	0 (0%)	2 (.90%)
<b>Non-LARC users</b>	19	81

### 33. A 10-year Post-Marketing Review of the Etonogestrel Implant in Adolescents



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**Background:** Advising the adolescent population on pregnancy prevention is an important role of health-care providers. The etonogestrel sub-dermal implant was approved in 2008 as a long acting, reversible contraceptive. The manufacturer study showed the contraceptive's side effects and treatment length in a sample population, but no long-term post-marketing study has been conducted to examine these effects in clinical practice. The primary objective of our study is to compare clinical, post-marketing data to pre-marketing data.

**Methods:** A total of 800 female patients 12-24 years old who received an Etonogestrel Sub-dermal implant from 2008-2019 were included in this retrospective study. After institutional IRB approval, data was obtained from the clinic's electronic medical record including age, insertion/removal dates, BMI, reason for removal, side effects, and reinsertion. Since descriptive statistics were not provided by Merck, comparative statistics could not be calculated. Descriptive statistics for our data were calculated instead.

**Results:** Implant failure rate among all 800 patients was 0%. At the time of this abstract, 49% of patients completed treatment, while 27.5% of patients were still in the process of completing treatment. Of the 305 patients who had the LARC removed early, 39.3% had it removed due to bleeding, compared to 11.1% of patients in the Merck study. Mood change and weight gain were the cause of removal in 4.3% and 3.6% respectively, while 3.3% and 2.3% of patients in the Merck study had early removal for these reasons. The average length of treatment among patients in our study who had early removal was 635 days (SD = +/- 341.7). The most common side effect reported during treatment among our patient population was bleeding, affecting almost 35% of patients. In the Merck study, 40.3% of patients experienced infrequent or prolonged bleeding during the first two years of treatment. In our study, 2.9% and 2.5% of patients reported mood change and weight gain respectively, while 12% and 13.7% reported these side effects in the Merck study. The average percent change in BMI was 6.9% (SD = +/- 14.55) in our study.

**Conclusions:** Overall, a greater percentage of patients in our study cited bleeding, mood change, and weight gain as primary reasons for removal compared to the Merck data. The differences between our results and the Merck data demonstrated the importance of using manufacturer data to inform patients about treatment while realizing that this data may differ from what is observed in clinical practice. Nevertheless, our study showed that the implant is a successful method of contraception for adolescents and these findings should not prevent recommendation from providers.

#### 34. Utility of Uterine Length Measurement by Ultrasound for IUD Candidate Selection



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**Background:** To determine if transvaginal ultrasound can be used as a reliable alternative to uterine sounding for measurement of uterine length prior to intrauterine device placement.

**Methods:** Retrospective chart review of women at University Health Services at the University of Wisconsin School of Medicine and Public Health who had both an intrauterine device placement and a transvaginal ultrasound measuring uterine length between 2007 and 2017. Differences in uterine length between sounding and ultrasound values were collected, with a planned sub-analysis for any patient with at least one measurement less than 6.0cm.

**Results:** 186 patients were included in the analysis. The average difference in uterine length between transvaginal ultrasound measurement and uterine sounding measurement was 0.49cm (p-value <0.001), with transvaginal ultrasound length measuring smaller. There were 27 patients with at least one uterine length measurement less than 6.0cm. In this cohort, the average difference in uterine length was 0.88cm (p-value 0.0026) with transvaginal ultrasound length measuring smaller.

**Conclusions:** Transvaginal ultrasound should not be used as a reliable alternative to uterine sounding for determining a minimum cut off for intrauterine device placement.

#### 35. Reasons for Heavy Menstrual Bleeding Treatment Discontinuation: Retrospective Chart Review of Adolescent Hematology Clinic



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**Background:** Studies of adult women with heavy menstrual bleeding (HMB) generally focus on the use of hormonal contraceptive methods. Less

is known about the effectiveness of treatment of HMB in adolescents, especially about reasons for discontinuation and failure. We examined reasons for discontinuation of first-line therapies among adolescents and young adults with HMB.

**Methods:** This is a retrospective chart review of women under 22 years of age seen at the Children's Hospital of Los Angeles Adolescent Medicine Hematology Clinic between January 1, 2015 and May 22, 2018. The primary inclusion factor was report or diagnosis of HMB. After IRB approval, data was collected on treatments, efficacy of treatments and adverse effects leading to discontinuation. Categories for discontinuation included: (1) inadequate menstrual bleeding control, (2) non-bleeding adverse effects, (3) other bleeding issues, and (4) other reasons. Discontinuation rates and percentages of adverse effects were calculated.

**Results:** A total of 106 women had HMB, and 37 of these patients had an underlying bleeding disorder (35%). Of those with bleeding disorders, 9 patients discontinued hormonal therapies and 5 patients discontinued non-hormonal therapies. Reasons for discontinuation of hormonal therapies included 4/9 (44%) with inadequate HMB control, 3/9 (33%) with adverse effects, 1/9 (11%) with other bleeding issues, and 1/9 (11%) with other reasons. Reasons for discontinuation of non-hormonal therapies included 4/5 (80%) with inadequate HMB control and 1/5 (20%) with adverse effects. Of those without bleeding disorders, 10 patients discontinued hormonal therapies and 1 patient discontinued non-hormonal therapy. Reasons for discontinuation of hormonal therapies included 2/10 (20%) with inadequate bleeding control, 4/10 (40%) with other bleeding issues, 2/10 (20%) with adverse effects, and 2/10 (20%) with other reasons. 1 patient discontinued non-hormonal therapy due to inadequate HMB control. In total, 18 of 73 women discontinued hormonal therapies (25%) and 7 of 17 women discontinued non-hormonal therapies (41%).

**Conclusions:** We found lower discontinuation rate for hormonal therapies compared to non-hormonal therapies, when used as treatment for HMB. Of the patients with bleeding disorders that discontinued their first-line method, the most frequently reported reason was inadequate bleeding control (62%). Of those without bleeding disorders, the most frequently reported reason for discontinuation was other bleeding issues (36%). Reasons for discontinuation differed between first-line methods with most variety noted among patients first treated with hormonal therapies, following trends seen in literature regarding treatment of HMB in adult women.

#### 36. Lessons from Intrauterine Device (IUD) IUD Contraceptive Failure in Young Women



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**Background:** Intrauterine devices (IUD) are one of the most effective forms of contraception. Their increased use is directly related to the decrease in the teen pregnancy rate in the United States and teens cite their high effectiveness and duration as the primary reasons for choosing them. Despite their extreme effectiveness, contraceptive failure does occur.

**Case:** This case series describes seven events of IUD contraceptive failure in adolescent women. The majority of the contraceptive failures resulted in intrauterine pregnancy. The majority of the cases of contraceptive failure occurred with the copper intrauterine device. While all of the young women expressed shock that they were pregnant with an IUD they all still chose on follow-up a reliable method of contraception. Half of them chose to have an IUD placed again.

**Comments:** This case is important because it highlights that as providers of long acting reversible contraception (LARC) to adolescents we should ensure our counseling discusses signs and symptoms of expulsion. We should also ensure that our primary care partners who may be doing the surveillance of these devices or may have more frequent contact with the adolescent feel comfortable working up a potentially expelled IUD and have comfort asking screening questions that would detect an early expulsion. Finally we should not allow the potential of contraceptive

Reasons for Discontinuation

