TIMING OF ON-STUDY PREGNANCIES WITH A VAGINAL PH MODULATOR IN THE PHASE 3 AMPOWER TRIAL

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P-436

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INTRODUCTION

- The Vaginal pH Modulator (VPM; Phexxi®) is a non-hormonal vaginal gel that maintains the pH of the vagina in the presence of semen in order to immobilize sperm and prevent pregnancy[1-3]
- In the phase 3 AMPOWER study, VPM resulted in a 7-cycle cumulative pregnancy percentage with typical-use of 13.7% and with perfect-use of 6.67%-9.99%[4,5]

OBJECTIVE

- The objective of this post-hoc analysis was to analyze the timing of on-study pregnancies that occurred in the AMPOWER study

MATERIALS AND METHODS

- AMPOWER was a multicenter, single-arm, 7-cycle study conducted in the US in healthy women 18-35 years old (NCT03243305)
- Women were directed to administer VPM intravaginally ≤1 hour before each act of vaginal intercourse
- The primary endpoint was the 7-cycle cumulative pregnancy percentage in the typical-use population, calculated using Kaplan–Meier methodology
  - An independent expert Pregnancy Review Committee reviewed all confirmed pregnancies to determine if the pregnancy occurred on-study (defined as having a date of conception between enrollment and <8 days after final study drug use)
  - For confirmed pregnancies, the date of conception was assessed from the following:
    - First trimester transvaginal ultrasound (considered the most accurate; later ultrasounds were not to be used for re-dating)
    - Estimate based on pelvic and/or abdominal examination or pregnancy outcome
    - eDiary information (eg, last menstrual period and sexual activity)
    - Quantitative beta-human chorionic gonadotropin (β-hCG) determination
    - Urine hCG (date of last negative and first positive)
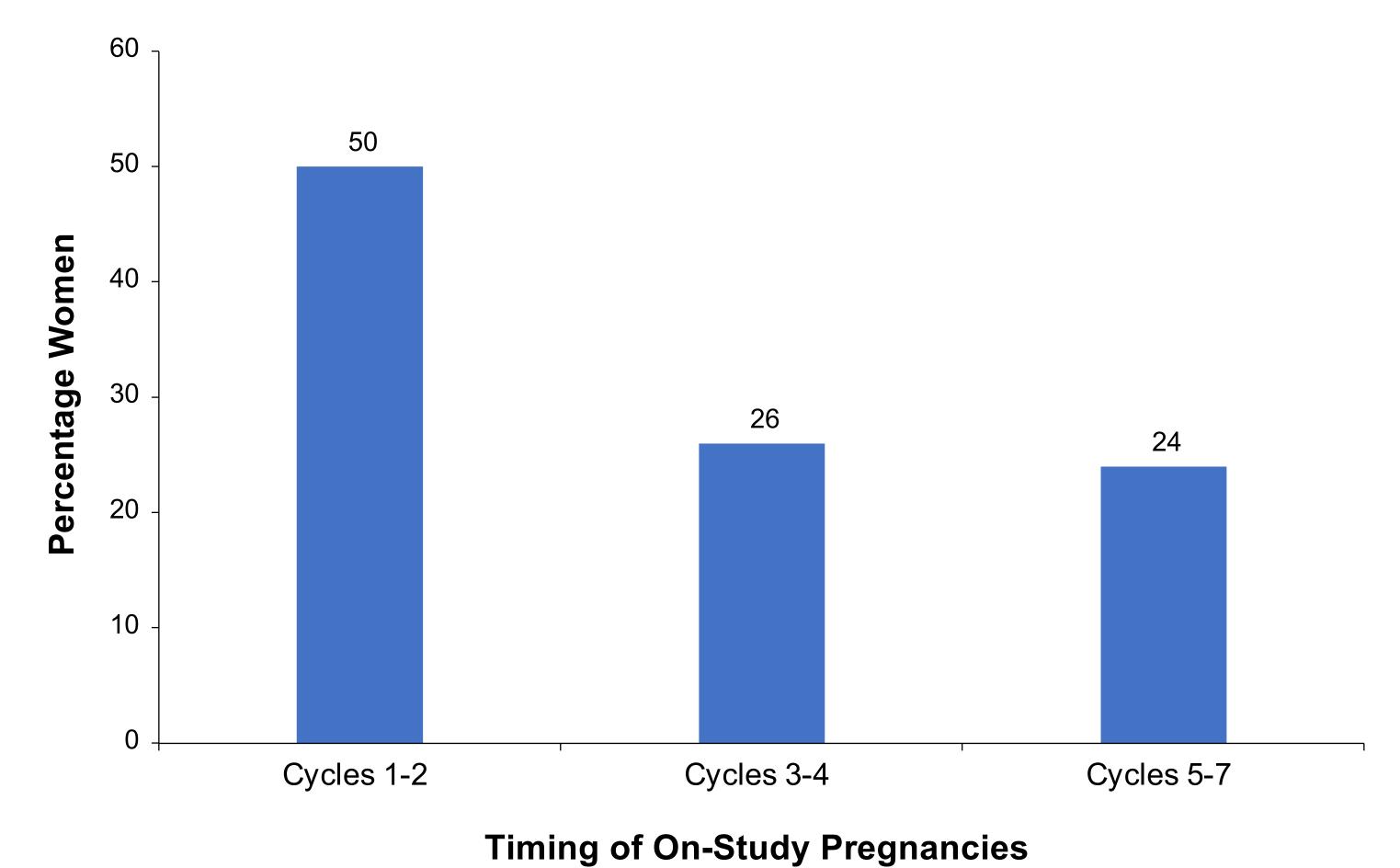   - Investigator estimation in the absence of above criteria

RESULTS

- Over the course of the study, 101 pregnancies occurred in 1183 women out of 24,289 acts of vaginal intercourse
- Approximately half (50% [51/101]) of on-study pregnancies occurred in the first 2 cycles; whereas less than one quarter (24% [24/101]) occurred in the last 3 cycles (Table 1; Figure 1)

Table 1. Number of On-Study Pregnancies by Cycle With VPM in the AMPOWER Study

Pregnancy by cycle, n (%)	VPM (N=1183)
n	101
1	30 (29.7)
2	21 (20.8)
3	9 (8.9)
4	17 (16.8)
5	10 (9.9)
6	9 (8.9)
7	5 (5.0)

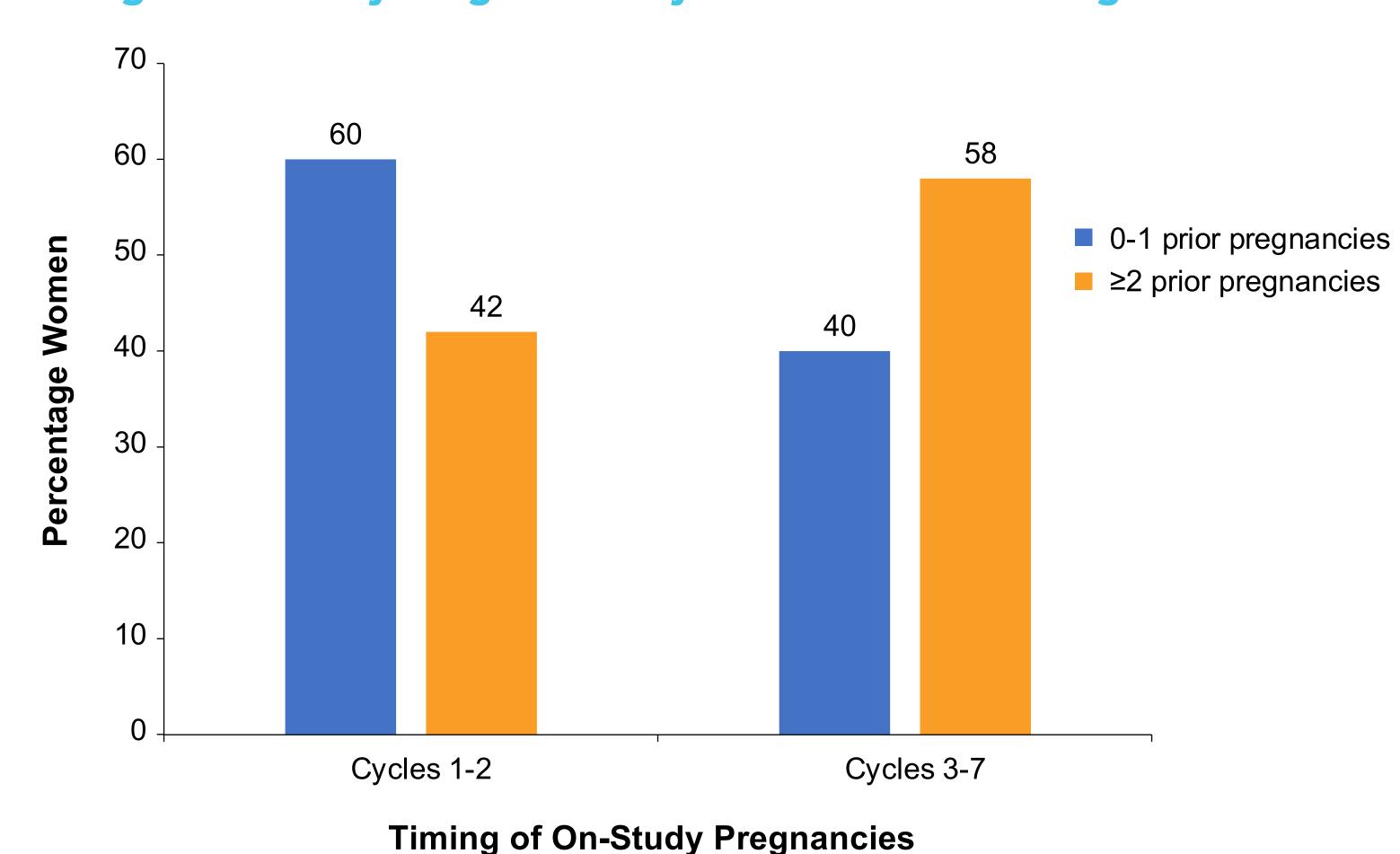Figure 1. Timing of On-Study Pregnancies

- When baseline characteristics were compared between women who had pregnancies early (defined as Cycles 1-2) vs late (Cycles 3-7), African American women had fewer pregnancies in Cycles 1-2 (43% [9/21]) vs Cycles 3-7 (57% [12/21]), whereas White women had the same number of pregnancies in both groups (50% [37/74] for Cycles 1-2 and 3-7) (Table 2)
- Hispanic/Latino women had fewer pregnancies in Cycles 1-2 (36% [8/22]) vs Cycles 3-7 (64% [14/22]), whereas non-Hispanic/Latino women had slightly more pregnancies in early vs late cycles (Cycles 1-2, 54% [43/79]; Cycles 3-7, 46% [36/79])

Table 2. Baseline Characteristics Between Women With Early (Cycles 1-2) vs Late (Cycles 3-7) On-Study Pregnancies

Parameter	Pregnant in Cycles 1-2 (n=51)	Pregnant in Cycles 3-7 (n=50)
Age at Enrollment (yrs.)		
Median (min, max)	27 (18, 35)	28 (19, 35)
Ethnicity, n (%)		
Hispanic or Latino origin	8 (15.7)	14 (28.0)
Not Hispanic or Latino origin	43 (84.3)	36 (72.0)
Race, n (%)		
Asian	4 (7.8)	1 (2.0)
Black or African American	9 (17.6)	12 (24.0)
White	37 (72.5)	37 (74.0)
Other	1 (2.0)	0
Body Mass Index (kg/m²) at Screening		
Median (min, max)	26.7 (13.2, 49.9)	27.5 (18.1, 66.8)
Prior pregnancies		
n	35	37
1	13 (37.1)	6 (16.2)
2	8 (22.9)	12 (32.4)
3	6 (17.1)	9 (24.3)
4	4 (11.4)	5 (13.5)
5	1 (2.9)	2 (5.4)
6	1 (2.9)	1 (2.7)
7	1 (2.9)	1 (2.7)
8+	1 (2.9)	1 (2.7)

- Women who had ≥2 prior pregnancies were more likely to become pregnant later in the study (Cycles 1-2, 42% [22/53]; Cycles 3-7, 58% [31/53]) as compared to women who had 0-1 prior pregnancies who were more likely to become pregnant early in the study (Cycles 1-2, 60% [29/48]; Cycles 3-7, 40% [19/48]) (Figure 2)

Figure 2. Timing of On-Study Pregnancies by Number of Prior Pregnancies*

*Prior pregnancies were defined as pregnancies that occurred before study enrollment.

- Compliance rates were similar between the two pregnancy groups (Cycles 1-2, mean 88%; Cycles 3-7, mean 86%)

CONCLUSIONS

- Approximately 50% of on-study pregnancies occurred in the first 2 cycles of VPM use
  - These findings are consistent with studies of other contraceptive methods suggesting that effectiveness improves over time
- Some baseline characteristics differed between women who had early vs late on-study pregnancies including race, ethnicity, and prior pregnancies

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DISCLOSURES

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