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Original Article

Uterine Retroversion as a Predictor of Pain in Outpatient Hysteroscopy Without Anesthesia

Retroversão Uterina como um Preditor de dor em Histeroscopia Ambulatorial sem Anestesia

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ABSTRACT

Context: The main limitations to the use of outpatient hysteroscopy (OH) without anesthesia or sedation have been pain and low patient tolerance. Among several possible pain predictors, we aimed to assess uterine retroversion (UR) as a reliable pain predictor during OH and at discharge. **Methods**: This study included data collected from August 2009 to January 2010 at a teaching hospital. Pain was measured using a visual analog scale (VAS; 0-10) at two time points. Women (n=291) were dichotomized according to presence (n=46) or absence of UR (n=245). Associations between UR and possible confounders were tested and no adjustment was necessary. Dichotomous variables were previous uterine curettage, parity, C-section, diabetes, hypertension, smoking, dyspareunia, dysmenorrhea, oral contraceptive use, chronic pelvic pain, aged”50y and endometritis. Ordinal variables were weight, height, age, education and duration of the procedure. To avoid the controversy of self-rated instruments like the VAS, non-parametric tests and multivariate logistic regression were used. **Results**: Groups with and without UR showed no statistical difference concerning pain scores. Median VAS scores (5th-95th percentiles) showed the same values during OH (5.0/0.0-10.0; p=0.455) and very similar values at discharge (2.0/0.0-9.7 and 2.0/0.0-9.0, respectively; p=0.471). When VAS scores were dichotomized, UR was not significantly associated with pain intensity during OH (p=0.678; OR=1.147, CI 95%: 0.600-2.191) or at discharge (p=0.315; OR=1.469, CI 95%:0.692-3.120). Concerning UR on the interruption of OH, there was no statistically significant association (p=0.151; OR= 2.176, CI 95%:0.736-6.431). **Conclusion**: Our data don’t support uterine retroversion as an isolated predictor of pain during office histeroscopy or just prior το discharge.

Key words: ambulatory care; hysteroscopy; pain assessment; retroverted uterus; confounders.

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INTRODUCTION

Outpatient hysteroscopy (OH) has been performed in an outpatient setting without anesthesia or sedation as a first-line procedure for the investigation and treatment of abnormal uterine bleeding, infertility and other conditions involving the cervical canal, uterine cavity and tubal ostia.[1]

Most gynecologists still have been unable to take advantage of the many potentialities of hysteroscopic procedures performed in the outpatient setting[2] and the main limitations to the widespread use of OH without anesthesia have been pain and low patient tolerance.[3] Despite being well tolerated by patients in most cases, considerable discomfort or pain occurs in some situations, which may affect the quality of the examination or even lead to its interruption.[4] Since 2009, our team of clinician researchers has tried to identify predictors of intense pain to create a screening protocol for selecting women for OH without anesthesia. In parallel, we assessed pain – usually referred to as cramps – just prior to discharge in order to optimize a preemptive analgesia protocol.

A retroverted uterus (also known as a tilted uterus or tipped uterus), is a uterus that is tilted backward instead of forward. Thus the body of the uterus is flexed within the pelvic cavity toward the back. This is in contrast to the slightly "anteverted" uterus that most women have, which is tilted forward toward the bladder, with the anterior aspect slightly concave.

Uterine retroversion (UR) is found in approximately 20% of women. Although it is considered an anatomic variant and not a pathological condition, it may be associated with dysmenorrhea and dyspareunia.[5] With respect to office hysteroscopy, UR was cited by Cooper in 1995 as a possible cause of failure in one out of 1000 procedures performed without anesthesia.[6] Furthermore, an anteverted uterus was associated with lower pain scores when van Dongen et al. assessed patient discomfort during saline infusion ultrasonography and OH performed using a vaginoscopic approach.[7]

Despite a lack of conclusive information about this issue, UR has usually been considered, by some hysteroscopy specialists (hysteroscopists), as a factor that, in clinical practice, predicts greater discomfort during OH. Thus, this study aimed to assess if and how much UR could be a reliable predictor of pain to be used as an independent selection criteria for identifying women who should not undergo OH without some specific strategy for pain control.

METHODS

This prospective observational study with quantitative approach included data from 291 consecutive procedures performed from August 2009 to January 2010 in the outpatient hysteroscopy clinic of the Fernandes Figueira Institute (IFF), a public teaching hospital of the Oswaldo Cruz Foundation (FIOCRUZ), where physicians in training perform OH under the supervision of highly experienced physicians. There were no specific exclusion criteria applied to our study cohort; however, routine contraindications for OH included pregnancy, uterine perforation less than one month before the procedure, copious uterine bleeding, acute pelvic inflammatory disease, and uncompensated conditions (i.e. untreated or poorly controlled arterial hypertension and self-reported uncontrolled diabetes mellitus).

Structured data sets were collected at three time points: (1) before OH, when the medical history is collected, and vital signs (blood pressure and heart rate) are measured; (2) immediately after OH, the intensity of pain during the hysterectomy was estimated by the patient; and (3) 15 minutes after OH just prior to discharge from the clinic, when the intensity of late pain (cramps) was quantified. The assessed dichotomized variables (Yes/No) included previous uterine curettage, parity, vaginal delivery, cesarean section, diabetes mellitus, hypertension, smoking, dyspareunia, dysmenorrhea, current oral contraceptive use, chronic pelvic pain and age d" 50 years, the usual median age at natural menopause.[8] After completing the hysteroscopy, the gynecologist categorized the patients as: having or not having UR and noted if the procedure was considered successfully concluded or interrupted; if any biopsy was performed during the OH; and if there was hysteroscopic diagnosis of chronic endometritis, a potential cause of pain. The diagnostic criteria for chronic endometritis at fluid hysteroscopy included the presence of both stromal edema and focal or diffuse hyperemia. According to Cicinelli et al. this combination has a diagnostic accuracy of 92.7%.[9] The interobserver agreement in diagnosing chronic endometritis is substantial[10] and has high sensitivity and acceptable specificity.[11]

The examinations were performed with patient in the lithotomy position, with a 2.9 mm hysteroscope using the vaginoscopy technique (without contact) described by Bettocchi and Selvaggi.[12] In this approach, the hysteroscope is introduced through the vagina and the cervix is exposed, while the distension solution flows. Next, the device is introduced through the external orifice of the cervix and moved forward through the canal into the uterine cavity. If necessary, a guided biopsy was performed, using hysteroscopic grasping forceps or a Novak curette, and aspiration could be performed using the Karma method after passage of a Collins speculum. OHs were performed using a saline (0.9% sodium chloride) solution at room temperature; warmed fluid has not minimized the intensity of pain in this population[13] but may increase its fluidity and favor intravasation.[14] Uterine distention was achieved by means of a gravity-fed irrigation system that was suspended 1.5 meter above the patient.

The total time taken to perform the examination was measured in minutes from the introduction of the hysteroscope into the vagina until removing it from the cervix.

All outpatient hysteroscopy examinations were performed without anesthesia or sedation. Moreover this study included only hysteroscopies that were performed with no prophylactic or preemptive analgesia. Oral medications – usually nonsteroidal anti-inflammatory drugs, paracetamol or butylscopolamine bromide – were offered just prior to discharge for pain relief when cramps persisted.

Pain intensity reported by the participants was assessed by the a single trained nurse using a visual analog scale (VAS). The same 10-centimeter plastic ruler, specially developed for measuring pain, was used systematically, which allowed the patient's pain to be rated from 0 (absence of pain) to 10 (worst pain imagined by the patient), as an ordinal variable that was directly proportional to the discomfort experienced by each individual. This method has been widely used in pain intensity studies.[15] Women's VAS pain scores were also categorized using cut-off values: Pain scored using the VAS as < 7 during OH was defined as tolerable, while pain scored as e"7 was defined as extremely painful or unbearable. These cut-offs were also used by van Dongen et al in 2008.[7] Corresponding cut-offs for the dichotomization of pain scores 15 min after OH (cramps at discharge) were defined as VASd"5 and VAS>5.

The variables were evaluated using a Kolmogorov-Smirnov normality test to assess their Gaussian distribution, in order to perform an adequate exploration of continuous variables. Statistical analyses were performed using SPSS 15.0 software (IBM Corporation, New York, United States). Cases with missing data were excluded from the analysis.

A non-parametric Pearson's chi-squared test was used to assess the association among dichotomous variables and the Mann-Whitney U test was used to compare groups in relation to ordinate variables. Tests were statistically significant when $p<0.05$. The minimum and maximum values of VAS scores were, respectively, 0 and 10 in all assessed groups; 5th and 95th percentiles represented data dispersion.

Since an association (or no association) between UR and pain scores may be found due in whole or in part to another variable, both groups of women (with and without UR) were first compared to assess their equivalence with respect to potential confounders. Pain intensity during the hysteroscopy and just prior to discharge was dichotomized according different cut-off values (VAS = 3, 5 and 7) and used as a dependent variable in a multiple logistic regression analysis to assess the odds ratio of the main covariates and at the threshold of $p<0.10$.

This study has been approved by the Research Ethics Committee of Fernandes Figueira Institute of the Oswaldo Cruz Foundation (IFF-FIOCRUZ: 0045.0.008.000-07), which is a subordinate of the National Research Ethics Commission of the Brazilian Ministry of Health, in accordance with the Guidelines and Regulatory Standards for Research Involving Human Beings (CNS196/96). All patients gave their written informed consent prior to their inclusion in the study.

RESULTS

This study assessed 291 women (21-85 years old) who underwent OH without anesthesia. In this series, 273 examinations were successfully completed and 18 were aborted due intolerable pain, which represented an interruption or failure rate of 6.2% (CI 95%: 3.7-9.2). There was no instance of vasovagal syncope following OH and no severe complication in this series. Of the 291 subjects, 46 were classified as having uterine retroversion, and 245 were classified as having an anteverted uterus; thus the prevalence of UR in this cohort was 15.8% (95% CI: 12.0-19.9).

In relation to potential confounders, there were significant differences only in relation to body mass index (BMI) ($p=0.033$) and previous uterine curettage ($p=0.020$) (Table 1). Regarding BMI as a confounder, nonparametric correlations between BMI and pain scores during OH and after 15 min (at discharge) were not statistically significant, and the Spearman correlation coefficients were -0.017 ($p=0.777$) and 0.071 ($p=0.241$), respectively. Still, the dichotomized pain during OH (intense when VASe"7.0), pain at discharge (intense when VAS>5) and failure were compared in relation to BMI values through Mann-Whitney U test. The median and 5th-95th percentiles values of BMI (kg/m^2) were: 26.7 (21.4-37.6) and 25.7 (18.7-39.0) for groups with and without intense pain during OH; 26.7 (21.3-35.7) and 25.9 (19.5-39.0) for groups with and without intense pain at discharge; 26.7 (22.2-36.8) and 26.1 (19.9-38.7) for the groups in which OH was aborted and successfully performed, respectively. Differences were not statistically significant: $p=0.457$, $p=0.676$ and $p=0.333$, respectively.

Specific analyses were also performed to assess previous uterine curettage as potential

confounder. When the two independent groups (with and without curettage) were compared, the median and 5th-95th percentiles VAS scores were 4.5 (0.0-10.0) and 5.0 (0.0-10.0) during OH, and 1.0 (0.0-8.0) and 2.0 (0.0-10.0) at discharge; differences were not statistically significant according to the Mann-Whitney U test (p=0.253 and p=0.141, respectively). (Table 1).

Finally, there were no significant association when Pearson's chi-squared test was used to assess the association between previous uterine curettage and the dichotomized intense pain during OH (p=0.077), intense pain at discharge (p=0.071), and failure to conclude the examination (p=0.555). Therefore, since BMI and curettage were not significantly associated with pain or failure rate (the main outcomes), there were no basis for considering them as confounders.

Groups with and without UR showed no statistical difference concerning pain scores. Overall, the procedures that were interrupted due to pain showed higher median VAS scores than concluded ones (p<0.001). Median VAS scores during procedure

Table 1 - *Characteristics of the patients according to the presence (n=245) or absence (n=46) of uterine retroversion.*

Variable	With UR (n=245)	Without UR (n=46)	p value
Continuous variables expressed as median [5th - 95th percentiles][a]			
Weight (kg)	67.0 [48.8 – 84.9]	68.0 [50.2 – 98.0]	0.210
Height (m)	160.0 [150.0 – 175.2]	160.0 [146.4 – 172.0]	0.238
BMI [b] (kg/m2)	25.3 [18.1 – 36.0]	26.6 [20.4 – 38.9]	0.033*
Age (years)	45.5 [28.3 – 64.6]	44.0 [28.3 – 71.7]	0.582
Education (years)	11.0 [3.4 – 15.0]	8.0 [1.0 – 15.0]	0.116
Duration (min)	10.0 [5.0 – 25.0]	10.0 [2.2 – 20.0]	0.092
Dichotomized variables (Yes/No) expressed as number of cases (%)[c]			
Curettage	19(41.3) / 27(58.7)	60(24.7) / 183(75.3)	0.020*
Parity[d]	39(84.8) / 7(15.2)	191(78.6) / 54(21.4)	0.297
Vaginal delivery	24(52.2) / 22(47.8)	133(54.7) / 112(45.2)	0.792
Cesarean section	23(50.0) / 23(50.0)	110(45.3) / 135(54.7)	0.524
Diabetes mellitus	2(4.3) / 44 (95.7)	11(4.5) / 233(95.5)	0.962
Hypertension	10(21.7) / 36(78.3)	75(30.9) / 169(69.1)	0.219
Smoking	6(13.0) / 40(87.0)	29(12.0) / 21(88.0)	0.817
Dyspareunia	9(19.6) / 36(80.4)	71(29.2) / 170(70.8)	0.194
Dysmenorrhea	11(24.0) / 34(76.0)	81(33.3) / 163(66.7)	0.247
Oral contraceptive	9(19.6) / 37(80.4)	46(19.0) / 199(81.0)	0.900
Chronic pelvic pain[e]	1(2.2) / 45(97.8)	10(4.1) / 235(95.9)	0.534
Age d" 50 years[f]	31(67.4) / 15(32.6)	170(70.0) / 75(30.0)	0.788
Endometritis[g]	4(8.7) / 38(91.3)	19(7.8) / 217(92.2)	0.750
Biopsy	28(60.9) / 18(39.1)	7(31.7) / 168(68.3)	0.307
Aborted/failure[h]	5(10.9) / 41(89.1)	13(5.3) / 232(94.7)	0.151

[a] Mann-Whitney U test was used to compare differences between two independent groups in relation to an ordinal variable.
[b] BMI: body mass index.
[c] Pearson's chi-squared test was used to assess the association between two dichotomized variables.
[d] Parity is defined as the number of times that a woman has given birth to a fetus with a gestational age of 24 weeks or more, regardless of whether the child was born alive or was stillborn.
[e] Chronic pelvic pain was defined as recurrent or constant pain in the lower abdominal region that has lasted for at least 6 months [16].
[f] Median age at natural menopause is approximately 50 years [8,17].
[g] Hysteroscopic diagnosis.
[h] Hysteroscopies that were interrupted due intolerable pain.
** p<0.05.*

(5th-95th percentiles) for interrupted and concluded OHs were, respectively, 8.5 (3.0-10.0) and 5.0 (0.0-10.0). Additionally, concerning the influence of UR on the interruption of OH before its conclusion, the association was not statistically significant (p=0.151; OR=2.176, CI 95%: 0.736-6.431) (Table 2).

In this study, only 23 individuals were diagnosed as with chronic endometritis and prevalence was calculated as 8.3% (CI 95%: 5.4-11.9). Pain was more intense, curiously, when endometritis was not diagnosed (not statistically significant with the Mann-Whitney test). Median VAS scores (5th-95th percentiles) during OH were 4.0 (0.0-10.0) and 5.0 (0-10) for groups with and without chronic endometritis, respectively (p=0.056). At discharge, values were, respectively, 0.0 (0.0-9.0) and 2.0 (0.0-9.6) (P=0.291). When VAS was dichotomized, chronic endometritis was not significantly associated with intense pain during OH according to Pearson's chi-square test (p=0.071; OR=0.373, CI 95%: 0.123-1.130) or at discharge (p=0.571; OR=0.697, CI 95%: 0.199-2.445).

Even when a statistical significance limit of p<0.10 was adopted, UR was not a statistically significant predictor of pain during OH, neither for VAS>5 nor for VASe"7 cut-offs using multiple logistic regression models. The independent variables included were uterine retroversion, previous curettage, cesarean-section, age d" 50 years, biopsy, chronic pelvic pain, and BMI. Although UR had no influence on pain at discharge, aged"50y was significantly associated with VAS>5 (p=0.008); previous curettage and premenopausal status may have some importance for predicting VAS>3 and VAS>5 at discharge (0.05<p<0.10). Also, in this series of 291 cases, there was no statistically significant predictor for interruption of OH before its conclusion. Table 3 shows the adjusted OR values for each covariate considered.

DISCUSSION

Our results do not support UR as a reliable independent predictor of pain during OH or at discharge. The probability of interruption when this procedure is performed without anesthesia does not seem to be strongly influenced by this anatomical variation. The prevalence of UR in this cohort was 15.8% (95% CI: 12.0-19.9), which most likely reflects the approximate natural occurrence in this population. Fauconnier et al.[5] found a prevalence of 24% when assessing premenopausal women and concluded that UR was not an isolated cause of pelvic pain symptoms.

In 2008, van Dongen et al published a study using a multiple linear regression analysis that found that an anteverted uterus was associated with lower pain scores during OH.[7] In their study, multiparity, shorter procedure time, and the position of the uterus in anteversion decreased pain scores when assessing patient discomfort among women undergoing OH. There was, however, no mention regarding the normality of the data, a condition required before performing a parametric analysis. The prevalence of UR in the 47 individuals who underwent OH was not reported.

Table 2 - *Association between uterine retroversion (UR) and pain intensity.*

Main outcomes	With UR (n=46)	Without UR (n=245)	p value	OR (CI 95%)
Pain during OH (VAS score)	5.0 (0.0-10.0)	5.0 (0.0-10.0)	0.455[a]	-
Pain after 15 min (VAS score)	2.0 (0.0-9.7)	2.0 (0.0-9.0)	0.471[a]	-
Pain during OH > 7.0	18 (39)/28(61)	88 (36)/157(64)	0.678[b]	1.147 (0.600-2.191)
Pain during OH > 5.0	21 (46)/25(54)	106 (43)/139(77)	0.765[b]	1.102 (0.585-2.074)
Pain after 15min > 5.0	11 (24)/35(76)	43 (18)/201(82)	0.315[b]	1.469 (0.692-3.120)
Pain after 15min > 3.0	17 (37)/29(63)	77 (32)/167(68)	0.473[b]	1.271 (0.659-2.452)
Aborted/failure[c]	5 (11)/41(89)	13 (5)/232(95)	0.151[b]	2.176 (0.736-6.431)

[a] Mann-Whitney U test was used to compare differences between two independent groups in relation to an ordinal variable.
[b] Pearson's chi-square test was used to assess the association between two dichotomized variables.
[c] Procedures that were interrupted due intolerable pain.
Cases with missing values were excluded from the analysis.
VAS scores expressed as median (5th-95th percentiles).

Table 3 - *Adjusted Odds Ratio (OR) of covariates in a multiple logistic regression used for predicting different levels of pain intensity and interruption of examination before its conclusion (dependent dichotomous variables).*

	VAS[a] during OH > 7 OR (95% CI)	VAS[a] during OH >5 OR (95% CI)	VAS[a] after 15 min >5 OR (95% CI)	VAS[a] after 15min >3 OR (95% CI)	Interrupted OR (95% CI)
UR[b]	1.265 (0.635-2.522)	1.094 (0.561-2.133)	1.804 (0.780-4.170)	1.433 (0.709-2.897)	1.849 (0.541-6.317)
Curettage	0.619 (0.341-1.125)	0.725 (0.413-1.272)	0.455 (0.201-1.026)[#]	0.578 (0.311-1.075)[#]	1.197 (0.392-3.657)
C-section	1.101 (0.666-1.822)	1.364 (0.839-2.218)	0.701 (0.365-1.344)	0.745 (0.441-1.258)	1.426 (0.505-4.024)
Aged"50y	0.784 (0.450-1.365)	0.859 (0.499-1.478)	3.314 (1.375-7.988)**	1.666 (0.910-3.051)[#]	0.744 (0.246-2.252)
Biopsy[c]	0.973 (0.568-1.666)	1.098 (0.653-1.847)	1.021 (0.517-2.015)	0.876 (0.500-1.534)	[not included]
CPP[d]	2.023 (0.556-7.356)	1.957 (0.529-7.248)	3.320 (0.835-13.202)[#]	2.327 (0.631-8.587)	2.124 (0.238-18.940)
BMI[e]	0.986 (0.942-1.033)	1.013 (0.968-1.059)	0.995 (0.936-1.058)	0.996 (0.949-1.046)	0.975 (0.890-1.067)

[a] *VAS: visual analog scale (0-10).*
[b] *UR: uterine retroversion.*
[c] *Biopsy was not included as covariate in the analysis of interruption because there was potential bias (i.e. biopsy is performed only when procedure is minimally tolerable).*
[d] *CPP: chronic pelvic pain, defined as recurrent or constant pain in the lower abdominal region that has lasted for at least 6 months [16].*
[e] *BMI: Body Mass Index (kg/m^2).*
** $p<0.01$.
[#] $0.05<p<0.10$.

Regardless of the orientation of the uterus, the median duration of OH was 10 min (Table 1). Concerning the longest procedures (time duration in the 95th percentile), 5% of the OHs performed on patients with UR lasted longer than 20 min, and 5% of those without UR lasted longer than 25 min (Table 1). Readers, therefore, should be aware of the characteristics of the current sample; our results should not be extrapolated for all situations. For example, very experienced physicians who perform OH do not tend to take longer than a few minutes and some authors have found some variables as predictors of pain. These variables include the waiting time for the procedure,[18] postmenopausal period,[19,20] chronic pelvic pain, anxiety and cesarean section.[20] We think that guidelines should ideally be developed based on data from the same (or at least similar) populations.

Although procedures in IFF-FIOCRUZ were often performed by physicians in training under the supervision of experienced practitioners, the success rate in this series (93.8%; CI 95%: 90.8-96.3) was similar to the 92% rate reported by van Dongen et al.[7] Moreover, the median OH duration in both series was identical (10 minutes). Therefore, these facts suggest that conclusions from the current study could be potentially useful for predictions in other populations and other institutions.

This study had several limitations. Among them, the lack of information about the degree of women's anxiety immediately before the examination, since this variable, despite being very difficult to accurately quantify, has been found to be an important factor.[20]

Another weakness is the type II error probability (the failure to reject a false null hypothesis; that is, the probability of a false negative conclusion). Indeed, the power of the test could be easily calculated *with basis on frequent approaches*, which depend on somewhat arbitrarily chosen/elected factors, such as the type I error probability, standard deviation, and sample size of both groups, and the smallest clinically important difference (i.e. the minimal difference between average scores).

Finally, pain intensity descriptors fundamentally lack precision and have different meanings in different languages.[21]

In summary, regardless of whether a statistically significant difference exists between groups with and without UR, they are not large enough to support UR as a reliable independent selection criterion to exclude women from undergoing OH without anesthesia.

If all 46 women with a UR in this study with 291 cases had been given general anesthesia for their

hysteroscopies, 41 would have been subjected to anesthesia unnecessarily. Instead, the five women with a UR whose hysteroscopies were interrupted were rescheduled and examined successfully under anesthesia. While we continue to lack a good predictor, the strategy of "waiting for failure" has been universally adopted for optimizing equipment and human resources.

This study makes clear that a hypothesis should be rigorously tested before being imposed as a normative rule. Moreover, it reinforces the concept that a clinical sensibility from years of experience is a cornerstone of medicine. The physician must pay attention to the patient's clinical signs, verbal expressions and body language, probably the best predictors of the kind of pain during hysteroscopy that will require interruption of the procedure.

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RESUMO

Contexto: As principais limitações para a prática de histeroscopia ambulatorial sem anestesia (HDA) ou sedação têm sido dor e baixa tolerância da paciente. Entre os vários preditores de dor, objetivamos avaliar a retroversão uterina (RU) como um preditor confiável de dor durante HDA e na alta. **Métodos**: Este estudo incluiu dados coletados de agosto de 2009 a janeiro de 2010 em um hospital de ensino. A dor foi medida por meio de uma escala visual analógica (0-10) em duas etapas; as mulheres (n = 291) foram dicotomizadas como com (n = 46) e sem RU (n = 245). As associações entre as possíveis variáveis de confusão e RU foram testadas e nenhum ajuste foi necessário. Variáveis dicotômicas foram curetagem uterina anterior, paridade, cesariana, diabetes, hipertensão, tabagismo, dispareunia, dismenorréia, uso de contraceptivos orais, dor pélvica crônica, idade d" 50 anos e endometrite. Variáveis ordenáveis foram peso, altura, idade, escolaridade e tempo de duração do procedimento. Para evitar controvérsias acerca da natureza da escala de dor, testes não paramétricos e regressão logística multivariada foram utilizados. **Resultados:** Grupos com e sem RU não mostraram nenhuma diferença estatística em relação aos escores de dor. A mediana dos escores de dor (e os percentis 5 e 95) apresentaram os mesmos valores durante HDA (5.0/0.0-10.0, p=0,455) e muito semelhantes na alta (2.0/0.0-9.7 e 2.0/0.0-9.0, respectivamente, p=0,471). Quando dicotomizada, RU não foi significativamente associada à intensidade da dor durante HDA (p=0,678, OR = 1,147, IC95%: 0,600-2,191) ou na alta (p=0,315, OR = 1,469, IC95%: 0,692 -3,120). Quanto à associação entre RU e interrupção de HDA, esta não foi estatisticamente significativa (p=0,151, OR = 2,176, IC 95%: 0.736-6,431). **Conclusão**: Nossos dados não corroboram que a retroversão uterina seja um preditor isolado de dor durante histeroscopia ambulatorial sem anestesia ou na alta.

Palavras-chave: Assistência ambulatorial. Histeroscopia. Avaliação de dor. Útero retrovertido. Confundidores.

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