

Anodyspareunia. Anal Pain During Anoreceptive Sexual Intercourse In Men Who Have Sex With Men

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ABSTRACT

Introduction: The perianal region is very rich in sensory nerve endings, which determines that anal erotism is frequent, regardless of sexual identity and sexual orientation. Despite this, the impact of receptive anal sex (RAS) on anal health has been little studied. Some people experience pain during anoreceptive sex. The objectives of this study were to evaluate its prevalence in a sample of men who have sex with men (MSM) resident in Argentina and identify potential factors associated with its appearance.

Design: Descriptive, transversal study.

Population and method: A voluntary and anonymous survey was designed. It included demographic variables and factors related to RAS. It was answered on the Internet between March 2015 and February 2016. MSM over 18 years of age resident in Argentina, who had practiced RAS during the last four weeks, were included. Bivariate and multivariate statistical analyzes were performed in logistic regression models.

Results: Two hundred and eight MSM answered the survey. One hundred and thirty-five (64.9%) who had maintained RAS in the last four weeks were selected for the analysis. 76.3% resided in Ciudad Autónoma de Buenos Aires and Buenos Aires Province. 92.6% had higher education. 88.9% reported that they experienced some level of pain during RAS, being severe in 5.5% of cases. In the bivariate analysis variables associated with the development of pain were: "age", "age of onset of sexual intercourse in general", "fear of suffering pain", "fisting", and "fear of getting dirty". In the multivariate model, the "age of coming out", the "fear of suffering pain", and the "use of poppers" appeared as possible risk factors. As possible protective factors, "fisting", "outing age", "age" and "age when starting intercourse with other men" were identified.

Conclusions: This study focused on the anodyspareunia experienced specifically by the male homosexual group in Argentina. 88.9% experienced some level of pain, being severe in 5.5%. As in other education, possible predisposing factors have been identified, some modifiable and others not. A greater knowledge of the potential influential factors will allow to health professionals provide a better advice to the affected population on pain prevention and anal erotism in general.

Key words: Anodyspareunia; Anal Sex; Men who Have Sex with Men

INTRODUCCIÓN

Anal eroticism is frequent, both in men and women, regardless of their sexual preference.^{1,2} The perianal region is an area very rich in nerve endings.³ The pudendal nerve innervates the sensory structures of the genitals, perineum and anus, being responsible for the pleasant sensations that lead to orgasm.⁴ This fact influences that anal stimulation is part of the sexuality of many individuals.

Among men who have sex with men (MSM), those who perform anal penetration are called active and those who are penetrated are called passive. Those who enjoy both practices are called versatile.

Education evaluating anal sexuality in this population do so mainly for the impact it can have on the transmission of the Human Immunodeficiency Virus (HIV).⁵ Epidemiological investigations carried out by Laumann et al.⁶ in the context of this infection, estimated that up to 80% of MSM engaged in anal sex. Another study revealed that 46% of MSM prefer to be active, while 43% prefer the passive role.⁷ In the USA, the prevalence of anal sexual intercourse between MSM has increased significantly in re-

cent decades. In San Francisco, a work carried out by The "Stop AIDS" Project reported an increase in the practice of anal sex among MSMs from 57.6% in 1994 to 61.2% in 1997.⁸ In the youngest MSM subgroup (15-22 years), the prevalence of this practice reached 85-95%.

Despite its high frequency, the impact of receptive anal sex (RAS) on anal health has practically not been studied; the scientific works that exist are based on few patients and have poor scientific evidence, being mostly expert opinions.⁷

Some MSMs experience pain during RAS. This is called anodyspareunia (AD), in analogy to the term dyspareunia referring to pain experienced by women during vaginal intercourse.¹⁰ Although this symptom is not uncommon; information about this sexual dysfunction is scarce.

There are controversies about the magnitude of pain that must be experienced to define it as AD. Some authors consider that anal sex carries a certain level of acceptable discomfort; however, others believe that it must not be necessarily painful, and that is the reason to include it within the sexual dysfunctions of the MSM population.^{11,12} Depending on the definition chosen, its prevalence ranges from 14% to 61%.¹³⁻¹⁶

Possible relationships between various situational, beha-

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vioral, social and biological conditions and the appearance of painful RAS were studied: degree of lubrication of the anal area, previous digital stimulation and level of relaxation.

pre-existing, size of the penis of the sexual partner, internalized homophobia, level of sexual arousal and age, among others.¹³⁻¹⁷ The relationships found show different degrees of correlation but, for now, it has not been possible to clearly establish a set of conditions that due to their strength of association can be defined as true predisposing factors of AD.

The objectives of the present work are to evaluate the prevalence of AD in a sample of the group of MSM residing in Argentina and to identify potential factors associated with its appearance.

The possible relationships between various situational, behavioral, social, and biological conditions and the appearance of painful RAS were studied: degree of lubrication of the anal area, previous digital stimulation, and level of pre-existing relaxation, size of the penis of the sexual partner, internalized homophobia, level of sexual arousal, and age, among others.¹³⁻¹⁷ The relationships found show different degree of correlation, but it has not yet been possible to establish a set of conditions that due to their association strength can be defined as true predisposing factors for AD.

The objectives of the present study are to evaluate the prevalence of AD in a sample of the group of MSM residing in Argentina and to identify potential factors associated with its presence.

POPULATION AND METHODS

MSM over 18 years of age residing in Argentina, who had practiced RAS during the last four weeks, were included. A survey was designed that was answered voluntarily and anonymously on the Internet between March 2015 and February 2016. Before starting the study, a pilot test was conducted in 30 individuals who were not included in the final sample, in order to assess their understanding and correct possible errors in the design. The sample obtained, non-probabilistic and for convenience, included a total of 208 men from which were selected

those who have maintained RAS in the last four weeks. The restriction of the analysis to this period was based on the fact that the questions referring to the sub-domain of pain were based on an adaptation of the Female Sexual Function Index (FSFI). This index showed its maximum reliability as a survey when the investigation was over that period of time.¹⁸ This same period was used in the GAMESS study (GAY MEN SEX EDUCATION), the largest survey published on gay sexuality.¹⁶ The final sample

included in the analysis was 135 men (64.9% of the total surveyed).

The survey included 41 items divided into three domains:

1. Demographic variables that included general characteristics (age, country of birth, occupation, educational level, religion, etc.), and aspects related to orientation and sexual practices (age of coming out of the closet, age of initiation of sexual intercourse with men, role in sexual practices with men, among others).
2. Variables that specifically characterize RAS, including prevalence of AD and various conditions associated with it. Since there is no validated test to assess pain during RSA, a version adapted from the item pain of the FSFI, changing the word "vaginal" by "anal", was used as suggested by Vansintjan J et al.¹⁸ The visual analog scale (VAS) was used to assess its magnitude; a slight pain is that scored between 1 and 3 points, moderate between 4 and 6, and grave more than 7.¹⁹
3. Variables referring to practices eventually associated to the RAS.

Statistical analysis

Descriptive information for the three domains was presented in frequency tables as categorical variables. The prevalence estimator for AD was calculated. The bivariate and multivariate analysis with logistic regression (RL) models, were performed, considering AD as the dependent variable. The independent parameters studied were all those characteristics and/or conditions that were considered potentially associated with the presence of AD during RAS. Bivariate regression for each parameter considered as independent variable and AD, as dependent. Each parameter that achieved statistical significance ($p \leq 0.05$) in bivariate analysis was included in the logistic regression multiple model, establishing the level of statistical significance of the model in 5% ($p \leq 0.05$). SPSS Statistics program 21.0, IBM (SPSS Inc., Chicago, IL, USA) and Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) were used for the statistical analysis.

RESULTS

Two hundred and eight men over 18 years of age (mean age 37.9 ± 11.7 SD) residents in Argentina and self-identified as MSM answered the survey. Of them, 135 (64.9%) who confirmed having maintained RAS in the last four weeks were included in the study. Eighty five percent were between 21 and 50 years old, with a median age of 38 years.

Descriptive statistics

Table 1 shows the demographic and the general sexual behavior characteristics of the study population. The biggest part of the sample corresponded to men born in Argentina (91.1%) and natives of the Autonomous City of Buenos Aires or the Province of Buenos Aires (76.3%), between 21 and 50 years of age. Most of them were independent or dependent workers (81.5%), with high educational level, with tertiary, university and postgraduate education (92.6%).

Regarding religious beliefs, respondents were non-practicing believers (39.3%), or atheists/agnostics (47.4%).

There were no dysphoric features regarding identification as MSM: 94.1% of surveyed manifested comfortable or very comfortable with their sexual orientation. Regarding the pathological history, 55.7% of them reported having had sexually transmitted infections (STIs) in their lifetime. Twenty six percent had anal pathology, predominantly condylomata 16.7%).

The majority of the population (88.1%) reported having assumed their sexual orientation in two age range, 12-20 years old (48.1%) and 21-30 years old (40%).

The most frequent age of onset of sexual intercourse (independent of the gender of the couple) was within 12 and 20 years (77.4%), coinciding with the age range in that they maintained the first sexual intercourse with a man (65.4%). With regard to preferences on anal sexual practices prevailed those who favor the passive role, although without ruling out an occasional active role (43.7%), and those who assumed themselves as versatile (37%). The majority (60%) stated that they share their sexual practices with a single partner and 31.8% with two to five. hg. Table 2 summarizes the main characteristics of RAS analyzed in the sample. In more than half of the cases (54%) the first relationship occurred before the age of 20 and in 31.6% between the ages of 21 and 30 years. The 68.1% of the men surveyed referred more than 50 RAS throughout their life. The 88% expressed some type of fear related to RAS: 30% exposed fear at soiling, 23% at pain, 21.4% at contagion of some STIs, and 13.6% to anal bleeding. On the other hand, 65.2% did not refer feelings of anxiety, discomfort, or tension before or during the anoreceptive practice. Regarding the degree of excitement with which they reached the sexual encounter and the degree of pleasure that was experienced during it, the majority of men surveyed give the highest scores to both categories.

Pain subdomain during RAS and prevalence of AD: 120 (88.9%) men reported having experienced some level of pain during RAS. A hundred and nine answered about the intensity of the pain. It was mild (1 to 3 on VAS) in 69.7% of the cases, while in the remaining 30.3% it was

moderate (4 to 6 on VAS, 24.8%) to severe (≥ 7 on VAS, 5.5%). The 67.4% referred feeling pain depending on the situation and/or partner, and only 5.9% mentioned it as a constant event. The majority of the respondents considered penis size and suddenness during penetration as factors of high relevance in the appearance of pain (67% and 93%, respectively).

AD had unintended consequences for 29.6% of individuals: avoid SAR to avoid pain (17.8%), evacuation discomfort after intercourse (16.3%), need to restrict the role to the active role (11%) or difficulty to establish new couple relationships (2.2%).

Table 3 describes a set of practices associated with RAS that show a very different frequency distribution: 66% referred digital stimulation of the anal area previous to intercourse; 44.5% pornography use, 44.2% enemas or anal showers. Only 40.7% referred condom use in all relationships. The 88.8% of men use lubricants, 73% declare never or hardly ever using anal sex toys, 14.8% admitted the practice of fisting (brachioproctal insertion), 2.2% of them always or almost always.

Regarding the use of psychoactive substances as a stimulus during RAS, 47% reported consumption of some of them, predominating marijuana (20%) and inhaled amyl nitrites -Poppers- (17%).

Inferential statistics

Table 4 shows the frequency and percentage of cases with AD, regardless of level or intensity of the painful sensation.

Table 5 reflects the results of the bivariate logistic regression analysis performed to identify independent predictive factors for AD, considering it the dependent variable. When comparing subjects with and without AD, it appears that the odds ratio of having AD is significantly influenced by the variables "age", "age of onset of sexual intercourse in general", "fear of pain", "fisting", and "fear of dirtiness". Other factors such as "age of onset of RAS", "years of practice of the RAS", "age of coming out of the closet", and "treatment of condylomata" were highly influential, but not statistically significant in RL models. In the multivariate logistic model analysis, where each of the variables shows its effect in the presence of the others, those that show statistical significance are "age", "fear of pain", "fisting", "age of coming out of the closet", "age of beginning intercourse with men", and "use of Poppers" (Table 6).

Statistical significance in the multivariate RL model show different signs in their coefficients (β positive and negative), so they are associated with higher or lower prevalence of AD, respectively. So that "age of coming out" ($\beta = 1,914$), "fear of suffering pain" ($\beta = 4,065$) and "use

TABLE 1A. CHARACTERISTICS OF THE POPULATION (N= 135)

General characteristics		n	%
Country of birth	Argentina	123	91.1
	Other countries	11	8.1
	No information	1	0.7
Province	City of Buenos Aires	69	51.1
	Province of Buenos Aires	34	25.2
	Other Provinces	20	14.8
	Not applicable	12	8.9
Age	18-20 years	3	1.4
	21-30 years	58	27.9
	31-40 years	68	32.7
	41-50 years	51	24.5
	51-60 years	19	9,10%
	> 60 years	9	4.3
Occupation	Unemployed	1	0.7
	Full-time student	8	5.9
	Part-time student and worker	12	8.9
	Retired	4	3.0
	Freelance or dependent worker	110	81.5
Education level	Incomplete primary education	2	1.5
	Incomplete secondary education	1	0.7
	Complete secondary education	7	5.2
	Incomplete tertiary education	12	8.9
	Complete tertiary education	12	8.9
	Incomplete university education	37	27.4
	Complete university education	27	2.0
	Incomplete postgraduate education	9	6.7
Complete postgraduate education	28	20.7	
Religion	Atheist or Agnostic	64	47.4
	Non-practicing believer	53	39.3
	Practicing believer	18	13.3
Past medical history	Anal surgery	14	6.5
	Local treatment of condylomata (TCA acid or other)	36	16.7
	Rubber band ligation of hemorrhoids	6	2.8
	IBD (Crohn's disease/Ulcerative colitis)	2	0.9
	Depressive disorder	14	6.5
	Panic attacks	12	5.6
	Other sexually transmitted infections (Syphilis, Herpes, Gonorrhea, Chlamydia trachomatis, Hepatitis B)	53	24.6
	HIV	31	14.4
	None of the above	47	21.8
	Approximate age of coming out of the closet	< 12 years	5
12-20 years		65	48.1
21-30 years		54	40.0
31-40 years		8	5.9
41-50 years		1	0.7
Not yet out of the closet		2	1.5
Age of onset of sexual intercourse in general	< 12 years	7	3.4
	12-20 years	161	77.4
	21-30 years	35	16.8
	31-40 years	5	2.4

TABLE 1 B. CHARACTERISTICS OF THE POPULATION (N= 135)

General characteristics		n	%
Age of onset of sexual intercourse with a man	< 12 years	11	5.3
	12-20 years	136	65.4
	21-30 years	55	26.4
	31-40 years	6	2.9
Role in sexual practices with men	Exclusively active	0	0
	Exclusively passive	4	3.0
	Usually active, sometimes passive	22	16.3
	Usually passive, sometimes active	59	43.7
	Versatile (Equally active and passive)	50	37.0
Comfort level with the current sexual orientation	Extremely comfortable	46	34.1
	Very comfortable	53	39.3
	Comfortable	28	20.7
	Little comfortable	6	4.4
	Not comfortable at all	2	1.5
Number of sexual partners	No couple	0	0
	1 couple	81	60.0
	2-5 couples	22	31.8
	6-10 couples	5	4.4
	>10 couples	5	3.7

TABLE 2A. RAS CHARACTERISTICS AND AD PREVALENCE

RAS characteristics and AD prevalence		n	%
Age of RAS onset	< 12 years	4	2
	12-20 years	113	54
	21-30 years	66	31.6
	31-40 years	21	10
	41-50 years	2	1
	>50 years	3	1.4
Approximate frequency of RAS throughout the life	Never	0	0
	< times	4	3.0
	10 to 20 times	8	5.9
	21 to 50 times	31	23.0
	>50 times	92	68.1
Belief of mandatory RAS for being MSM	Yes	15	11.1
	No	119	88.1
	No response	1	0.7
Possible fears related to the practice of RAS	No fear	29	12.0
	Pain	56	23.0
	Soiling	73	30.0
	Sexually transmitted diseases contagion	52	21.4
	Bleeding	33	13.6
Feeling of anxiety, discomfort, nervous tension or worry, before or during RAS	Never	54	40.0
	Hardly ever	34	25.2
	Sometimes	33	24.4
	Almost always	11	8.1
	Always	1	0.7
	No response	2	1.5
Presence of pain during RAS	Yes	120	88.9
	No	13	9.6
	No response	2	1.5
During RAS, pain is usually experienced	Now YES, before NO	1	0.7
	Before SI, now NO	23	17.0

TABLE 2B. RAS CHARACTERISTICS AND AD PREVALENCE

RAS characteristics and AD prevalence		n	%
Degree of arousal prior to RAS	Depending on the couple and/or the situation	91	67.4
	Always	8	5.9
	No responde	12	8.9
	No arousal	1	0.7
	Very little arousal	1	0.7
	Little arousal	4	3.0
	Moderate arousal	53	39.3
	Much arousal	73	54.1
Level of pleasure experienced during RAS	No responde	2	2.2
	No pleasure	0	0
	Little or very little pleasure	6	4.5
	Moderate pleasure	33	24.4
	Much pleasure	94	69.6
Degree of pain experienced during RAS (n=109)	No response	2	1.5
	1	36	33
	2	22	20.2
	3	18	16.5
	4	14	12.8
	5	8	7.3
	6	5	4.7
	7	3	2.7
	8	3	2.7
Consequences of feeling pain during or after RAS	09-10	0	0
	None	95	70.4
	Avoid passive anal sex	24	17.8
	Breakup of a couple	0	0
	Difficulty in establishing new relationships	3	2.2
	Restrict anal sex to the "active" or "penetrating" role	15	11.1
Evacuation difficulty after the RAS	Other	1	0.7
	Yes	22	16.3
	No	111	82.2
	No response	2	1.5

TABLE 3A. PRACTICES USUALLY ASSOCIATED TO RAS

Practices usually associated to ras		n	%
Use of sex toys during RAS	Never	82	60.7
	Hardly ever	16	11.9
	Sometimes	32	23.7
	Almost always	1	0.7
	Always	2	1.5
	No response	2	1.5
Digital anal stimulation before or during RAS	Never	21	15.6
	Hardly ever	23	17.0
	Sometimes	41	30.4
	Almost always	24	17.8
	Always	24	17.8
	No response	2	1.5
Fisting	Never	112	83.0
	Hardly ever	8	5.9
	Sometimes	9	6.7
	Almost always	1	0.7
	Always	2	1.5
	No response	3	2.2

TABLE 3B. PRACTICES USUALLY ASSOCIATED TO RAS

Practices usually associated to ras		n	%
Use of pornography before or during RAS	Never	54	40.0
	Hardly ever	18	13.3
	Sometimes	36	26.7
	Almost always	12	8.9
	Always	12	8.9
	No response	2	2.2
Use of enemas/anal showers before RAS	Never	67	49.6
	Hardly ever	9	6.7
	Sometimes	15	11.1
	Almost always	15	11.1
	Always	27	20.0
	No response	2	1.5
Condom use for RAS	Never	33	24.4
	Hardly ever	6	4.4
	Sometimes	18	13.3
	Almost always	20	14.8
	Always	55	40.7
	No response	2	2.2
Use of lubricants during RAS	Never	5	3.7
	Hardly ever	8	5.9
	Sometimes	15	11.1
	Almost always	35	25.9
	Always	70	51.9
	No response	2	1.5
Types of lubricants used	Aqueous	80	59.3
	Creams	22	16.3
	Oils /Vaselines	33	24.4
	Saliva (isolated or in conjunction with other lubricants)	71	52.6
Substances used before or during RAS	None	91	67.4
	Marijuana	27	20.0
	Cocaine	12	8.9
	Ecstasy	1	0.7
	Poppers (amyl nitrite)	23	17.0
Frequency of use of Poppers before or during RAS	Never	100	74.1
	Hardly ever	7	5.2
	Sometimes	8	5.9
	Almost always	8	5.9
	Always	4	3.0
	No response	8	5.9
Alcohol intake before RAS	Never	59	43.7
	Hardly ever	20	14.8
	Sometimes	48	35.6
	Almost always	5	3.7
	Always	1	0.7
	No response	2	1.5
Influence of partner's penis size on pain during RAS	Yes	90	66.7
	No	38	28.1
	NK/NR	7	5.2
Influence of sudden penetration on pain	Yes	125	92.6
	No	6	4.4
	NK/NR	4	3.0

TABLE 4. NUMBER OF AD CASES IN MSM THAT PRACTICED RAS THE LAST 4 WEEKS

	Anodyspareunia		
	Frequency	Percentage	Percentage
No	15	11.2	11.2
Yes	120	88.8	88.8
Total	135	100	100

of Poppers" ($\beta = 2,651$) are potential risk factors for AD, while "age" ($\beta = -0.063$), "age of onset of intercourse with men" ($\beta = -0.148$), and "fisting" ($\beta = -1,868$) are possible protection factors.

DISCUSSION

This study focused on the AD experienced specifically by the male homosexual collective. Since most of the respondents are inhabitants of the Autonomous City of Buenos Aires and the Province of Buenos Aires, the characterization detailed here refers to a MSM profile of urban centers from Argentina. It is mainly composed of young and young adults, active workers, and with broad access to higher education, profile similar to that of the Belgian study GAMESS.¹⁶

There are papers in the literature that evaluated AD in heterosexual women with mixed results.^{2,20} However, the conclusions of this subgroup cannot be extrapolated for various reasons, such as the different symbolic perception of the same sexual practice in these different social groups (straight women vs. MSM), and the anatomical differences between both biological sexes, namely the different anal canal length, the anterior decreased thickness characteristic in women, or the anorectal area in men that contact with a solid structure.

Based on the limited education available up to the date, pain during RAS appears as a problem that, although difficult to quantify, affects a significant percentage of MSM.^{11,13-16} Among the different reports there are differences in the populations studied and in the way to assess the presence of AD.¹³⁻¹⁶

In a first study, Rosser et al.¹⁴ reported that the 61% of 197 MSM suffered from painful RAS throughout his life. Damon et al.,¹³ restricting AD as severe and frequent pain, found 14% prevalence in a sample of 404 MSM. However, despite not complying with the clinical criteria imposed to be considered

AD, 43% of the individuals in the series reported moderate pain that interfered with their sexuality.

On a 277 MSM cohort, the same working group examined the frequency and severity of pain during RAS of the responding subjects or their active partners, finding that 24% of men rated episodes of pain as "frequent", and 11%

considered that the pain was severe.¹⁵ When both measures of effect frequency and intensity of pain) were associated to constitute a compound variable, the prevalence of frequent and severe AD reached 13%, very similar to the estimates of female dyspareunia (10-15%).² This study included MSMs that would have maintained RAS during the 3 years prior to the survey.

The time passed between the last receptive anus relations and the survey could have influenced the percentage of AD reported.

In our study, with the intention of reducing the bias of memory, in addition to supporting the repetition of this sexual practice, the period of four weeks was chosen, just like in the study by Vansintjean et al.¹⁶ The authors analyzed a subpopulation from the Belgian study on homosexual sexuality and found that, although 59% manifested pain, it was severe only in 2% of cases. In our series, 88.8% of the 135 MSM surveyed experienced some level of pain, being severe in 5.5%. However, despite the fact that the intensity of the pain was rated as mild in most cases of this casuistry, 30% of individuals reported moderate to serious pain. In addition, it had negative consequences (avoid RAS, restrict sexual activity to the active role, difficulty in establishing new relationships) in about a third of the respondents. In the Damon et al. series,¹³ this percentage was almost 50%.

When analyzing possible risk factors, it is necessary to clarify that the size of the population may have influenced in that only some of them have reached statistical significance in inferential analysis, while others have shown highly influential only on the descriptive level. So, fears of pain and soiling, history of anal pathology (particularly the treatment of condylomata), and some other subjective conditions like the age of coming out showed predisposition to AD.

Fears of potential suffering during intercourse can interfere in achieving the adequate anal relaxation indispensable to facilitate penetration, increasing the risk of pain. Regarding the relationship with the moment of coming out of the closet, assume homosexuality late could reflect a greater internalized homophobia,²¹ that could make it harder to reach the emotional delivery necessary to achieve sphincter relaxation during RAS, thus increasing the possibility of perceiving pain. However, in this study, the majority of the respondents expressed comfortable or very comfortable with their sexual orientation, which reflects a great self-acceptance.

Damon et al.,¹³ analyzed in two different studies the presence of internalized homophobia among those who suffered AD compared to those who did not, and found significant differences in only one of them.^{13,15}

Some factors such as fear of infections, the use of sex

TABLE 5. BIVARIATE ANALYSIS

Crude Odds Ratios	OR	CI 95% Inf.	CI 95% Sup.	p
Age	0.954	0.922	0.988	0.008*
Age of onset of intercourse in general	0.913	0.838	0.994	0.036*
Age of onset of intercourse with MSM	0.975	0.902	1.055	0.533
Age of RAS onset	0.951	0.899	1.005	0.076
Years of practice of RAS	0.973	0.942	1.004	0.090
Number of RSA/4 weeks	1.219	0.778	1.909	0.387
Number of men/4 weeks	1.063	0.846	1.336	0.598
Fear of pain	25.463	3.332	194.694	0.002*
Age of coming out of the closet	1.791	0.940	3.410	0.076
Religion	0.775	0.327	1.838	0.563
Fear of contagion of STI	1.523	0.609	3.809	0.368
Use of sex toys	1.725	0.729	4.084	0.215
Digital stimulation	0.659	0.232	1.871	0.434
Fisting	0.359	0.133	0.971	0.044*
Anal showers	1.188	0.504	2.801	0.693
Pornography	0.888	0.373	2.116	0.789
Condom use	1.379	0.565	3.368	0.480
Lubricants use	1.959	0.816	4.703	0.132
Marijuana	1.471	0.461	4.694	0.515
Cocaine	1.212	0.249	5.898	0.812
Poppers	2.864	0.627	13.080	0.175
Anal surgery	0.861	0.222	3.336	0.828
Condylomata local treatment	3.329	0.934	11.861	0.064
Rubber band ligation of hemorrhoids	1.202	0.134	10.750	0.869
Depressive disorder	3.385	0.423	27.126	0.251
Other STI	1.279	0.523	3.126	0.590
HIV	0.766	0.288	2.038	0.594
Fear of soiling	3.324	1.329	8.312	0.010*

* p < 0.05

STI: Sexually transmitted infections.

TABLA 6. MULTIVARIATE LOGISTIC REGRESSION ANALYSIS*

	B	E.T.	Wald	gl	Sig.	Exp(B)	CI 95% for Exp (B)	
							Inferior	Superior
Age	-0,063	0,026	5,826	1	0,016	0,939	0,893	0,988
Age of coming out of the closet	1,914	0,585	10,696	1	0,001	6,777	2,153	21,333
Age of onset of RAS with MSM	-0,148	0,065	5,239	1	0,022	0,862	0,759	0,979
Fear to pain	4,065	1,249	10,593	1	0,001	58,24	5,037	673,34
Fisting	-1,868	0,861	4,71	1	0,03	0,154	0,029	0,834
Poppers	2,651	1,073	6,104	1	0,013	14,166	1,73	116,034
Constant	3,092	1,285	5,788	1	0,016	22,026		
Hosmer Lemeshow	p	0,554						

* In the multivariate approach, the multiple regression analysis "steps forward" and "steps backward" was performed for the selected variables, with identical results.

toys, and depression also showed a high predisposing influence, although they did not reach statistical significance. Using Poppers showed a positive association with AD (although not statistically significant). This trend contrary to the expected could be owing to those who decide using amyl nitrites are those who experience the most difficulties during penetration. This correlation was not confirmed by Damon et al.,¹³ who found greater AD among those who did not consume Poppers.

Another aspect involved in many sexual dysfunctions is

religious. For this reason, unlike other education, I inquired about religious beliefs. In this group mostly from large urban centers, 86.7% of individuals were atheist/agnostic, or non-practicing believers. It is possible that if a greater number of individuals from more conservative provinces would have participated the percentages could have been different. Anyway, no association was found between religious practice and AD development. According with this finding, no dysphoric features were evident with regard to self-identification as MSM.

In other education the impact of the treatment of anal condylomata was not evaluated. In our research, although it do not reach significance statistically, probably due to the low number of cases, a predisposing trend was evidenced ($p=0.064$). In this particular factor two aspects are involved: one physical, related with any possible post-treatment sequelae, and another emotional, associated with the fact that it is a sexually transmitted infection. Both must be taken into account when addressing the resolution. It is necessary to speak clearly with the patient about his sexuality and possible consequences of the treatment, so that he may be part of the decision. In this study there was no discrimination among the different treatments for this pathology; future education are necessary to assess possible differences. This information could be useful at the moment of defining the management.

As in other education, the size of the penis and the suddenness during penetration were perceived by the majority of respondents as predisposing for suffering AD.^{13,15} Other predisposing factors are the lack of lubrication, the lack of digital stimulation of the anus, and the poor arousal prior to penetration.¹⁶

In relation to the conditions linked to a lower AD prevalence, can be significantly highlighted to be older (as in the GAMESS study), late start of sexual relations in general and with men in particular, and to be older during the first RAS.

The number of years of RAS and the practice of fisting also achieved a protective influence. Being older and having maintained RAS for more time would be associated with greater sphincter relaxation.

According to manometric education, the anal rest pressure is decreased in MSM with respect to that of straight men, endorsing this presumption.^{22,23} The extreme stretching of muscle fibers during fisting would justify a lower sphincter pressure, decreasing friction during intercourse and decreasing pain as a consequence.

According to the GAMESS study¹⁶, other "protective" factors are having a higher frequency of RAS, more number of sexual partners, and being part of a stable couple. Although we did not find these associations, the 67.4% of the respondents stated that AD was a fact dependent on the situation and/or partner.

It is not so clear the fact that AD is less prevalent when the onset of sexual relations in general and with men in particular, as well as starting RAS are at an older age, particularly since a greater age of coming out has a con-

trary trend. Large-scale studies are necessary to obtain more conclusions.

Strengths and limitations of the study

This study constitutes a first step in the study of AD in Argentina, a condition that undoubtedly is cause of suffering in a high percentage of MSM. The exploration of factors potentially associated with AD was more extensive than in other education.

The conditions linked to AD could be studied in only in 135 subjects, those who maintained RAS during the last 4 weeks. This could explain the lack of association between certain risk conditions and a higher or lower probability of AD. On the other hand, the data only reflect a highly educated MSM population, from urban areas, with internet access. Although nowadays its use is very widespread, individuals of poor resources or people not accustomed to the use of the network (for example, the older ones) could have been excluded from the survey.

Although the non-probabilistic nature of this sample does not allow inferring a population prevalence of the problem, the percentage estimates that the social scope of the condition it is very relevant.

Finally, more individuals experiencing pain during RAS may have answered the survey in an attempt for finding an answer to their problem, thus overestimating its prevalence.

CONCLUSION

Pain during RAS is frequent and has negative consequences in the quality of sexual life and relationships.

This and other education have identified possible predisposing factors, some modifiable and some not. Softness during penetration, the use of abundant lubrication and previous anal stimulation could decrease the risk of AD. Greater knowledge of potential influencing factors will allow health professionals better advice to the affected population about pain prevention in particular and anal eroticism in general.

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COMMENT

Anodyspareunia is a very uncomfortable condition for the patient who suffers from it. In this work, reference is only made to the group of male patients who have sex with men. When talking about "magnitude of pain experienced", some authors consider it as an "acceptable level of discomfort". How do we evaluate the intensity and magnitude of pain in a patient who has anal intercourse? Up to what point and what parameter is taken for the patient to incorporate the term acceptable or not?

The ANUS-PENIS variables are the main actors. Although the anatomy of the orifice and the anal canal may be very similar between patients, we will find many differences between them due to other factors, such as previous surgeries, as well as time and frequency of anal intercourse, with the consequent difference in sphincter muscle compliance and anal dilation.

We also know that variability in the size of the male member plays a fundamental role in the generation of anodyspareunia.

Other factors, as mentioned in the study, are the lubrication of the area, and the time that the couple dedicates to "sexual game" to achieve adequate relaxation, as well as the situation of emotional tension presented by the passive partner before and during sexual intercourse.

The doctor-patient relationship, the clinical interview, as well as the physical examination are the fundamental bases for the proper diagnosis and the consequent solution to the problem. Is it correct to carry out this statistical study based on a survey with "VIRTUAL" patients? when it was generated through the internet, where we have no knowledge of who is on the other side of the screen, we cannot know if the person who answers takes the questionnaire seriously, and we have no knowledge of the anatomical condition of the anal canal of that patient and less of his psychological condition? Can we draw conclusions with all these variables?

Anodyspareunia exists, and can be a big problem for those who suffer from it. The emotional, psychological, anatomical (of both members, passive and active) factors, apart from lubrication, associated anal pathologies, etc., will have an influence. It is difficult to classify all the possible causes of anodyspareunia, when the variables are so diverse. I consi-

der it appropriate to put the topic under discussion, to analyze it, but I would think it correct that all the data obtained in the questionnaire, that were excellently statistically analyzed in this work, be taken with patients assessed personally in the doctor's office, where the questioning and the physical examination are performed. In this way it will be feasible to make the evaluation of the possible cause of anodyspareunia with better detail and advise the patient how to reduce or avoid it.

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CLARIFICATION

Dear Dr. Laporte

Editor, Revista Argentina de Coloproctologia:

I would like to make a clarification on the comment made by Dr. Marcelo Pollastri to my work "Anodyspareunia. Anal pain during anoreceptive intercourse in men who have sex with men".

To carry out the survey of this article the self-administered format was specifically chosen (virtually in this case) because different education indicates that, when it comes to aspects related to sexuality, with this methodology better results are obtained. Questions about sexual orientation are considered "sensitive" questions, both by the participants and the interviewers; respondents may feel uncomfortable disclosing information for fear of being judged or stigmatized and interviewers can avoid asking certain questions or bias unconsciously the answers.

Although it is true that in any survey (regardless of the method used) there may be individuals who do not tell the truth, several education suggest that self-administered questionnaires improve the sense of privacy of respondents and their willingness to report sensitive information.

Nowadays the Internet is the most widely used tool for self-administered polls. As an example, the GAMESSS study, the most important survey worldwide on homosexual sexuality, was carried out following this modality. The authors conclude that the use of a self-administered online questionnaire is adequate to obtain sensitive information from a hidden population, such as men who have sex with men.

Finally, I believe that surveys are valuable tools for collecting information on large populations, and then the data collected will serve as a guide for clinical practice. I agree with Dr. Pollastri that when attending to individual cases an interrogation and the corresponding physical examination should be carried out to look for possible causes of the pain. Knowledge of the possible triggers of this symptom from the data provided by a large number of people will facilitate this search.

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