

RISK FACTORS IN THE PERSISTENCE OF CERVICAL INTRAEPITHELIAL LESIONS ASSOCIATED WITH LOW-RISK HPV INFECTION AFTER TREATMENT ABLACTIVO

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Abstract

General Objective Determine the risk factors in the persistence of cervical intraepithelial lesions of high and low risk associated with HPV infection ablactivo posttreatment.

Methodology. - Cases and controls, cases were 40 women with persistent cervical intraepithelial lesions ablactivo posttreatment. The controls 80 women with healing at 6 months after treatment were analyzed sociodemographic variables, reproductive, sexual, abuse, nutritional and associated comorbidity. The analysis was performed using odds ratios, confidence interval 95%, x2 test, Student t test.

Results. - The factors that showed statistically significant difference ($p < 0.05$) were: Extension of the lesion greater than 2 cm². (OR 8.53), presence of associated pathology. (OR 6.97), smoking associated with alcoholism (OR 5.40) Three or more sexual partners in the past three years. (O.R. 5.25), Obesity. (OR 4.58), Husband uncircumcised (OR 3.45), Home less sexually active at 17 years (OR 2.77), More than two periods (average) annual sexually transmitted infections in the last three years (OR 2.53), the pathology associated with the group of patients who continued the lesion were cervicovaginal infection and obesity.

Conclusion. - It is important to identify factors that may cause persistence of lesions to perform a more effective treatment

Keywords: Persistence of injury, cryosurgery, electrofulguration

INTRODUCTION

Cervical cancer is the second most common cancer in women worldwide (Muñoz 2003, Sanabria 2009, Zaldivar 2012). and is one of the leading causes of cancer death in the country, most often occurs in the prime of life of women (between 30 and 50 years old) and thus represents a serious socio-economic and national health. (Vargas 1996, Ramón y Cajal 2001), Infection with human papillomavirus (HPV) is the etiologic factor most important risk for development (Lorincz 1987, Bosch 2002, Zur 2002). This cosmopolitan infection in approximately 10 to 30% of women of reproductive age (Tirado 2005, Sanabria 2011).

At present, the treatment of subclinical infection human papillomavirus (HPV) causes considerable controversy. Considering its high recurrence of spontaneous regression and lack of specific antiviral drugs, many authors suggest follow a conservative scheme only treat cervical intraepithelial neoplastic lesions. However, other authors suggest the treatment of all forms of virus infection to prevent the development of cervical cancer (Gall 2001, Scheinfeld 2006).

The treatments include surgical excision by several methods: cryotherapy, laser therapy, the use of 5 - fluorouracil, trichloroacetic acid (Sanabria, 2009). The action mechanisms described in these treatments, but are believed to cause physical destruction of the infected tissue. In general, these treatments have proven effectiveness and different percentages of high recurrence, due to the presence of human papillomavirus in clinically normal epithelium and varying degrees of damage to the DNA-HPV in each treatment (Gross 2001, Carrozza 2002, Kodner 2004, Hernandez 2008, Valerie 2012).

The need to have available a therapeutic product that is effective and helps to eliminate the viral infection also can be applied to large populations, it is vital to reduce mortality from cancer Cervical cancer (Simmons 1981).

Electrofulguration used as surgical treatment because they have shown high effectiveness in the early stages of cervical lesions associated with infection by the virus papilomahumano (Hernandez 2006). However, there are some factors specific to the type of virus, the patient and the environment that influence the lesions persist after surgical treatment, either with electro fulguration or cryosurgery, which increases the likelihood of malignancy and resulting in cervical cancer (Ho 1995, Kobayashi 2004).

Persistence of HPV infection after treatment, is considered as after 6 months of treatment, even lesions observed by colposcopy or DNA persists as observed by molecular biology techniques.

There are several studies that suggest the existence of risk factors for persistent HPV lesions before and after treatment, which can be divided:

A. Acquisition:

1. - Risk sexual behavior: age at first intercourse, sexual promiscuity and non-use of condoms

Two. - High Risk Men: sexual promiscuity, not circumcision, lack of hygiene.

B. - Persistence / regression or cure:

1. - Viral. - Genotypes and variants, several types of HPV viral load simultaneous

Two. - Genetic. - Decreased immune response (immunosuppression), genetic susceptibility

Three. - Environment. - Age, snuff, oral contraceptives, parity

C. - invasion

1. - Angiogenic factors

(Ho 1995, Kobayashi 2004).

The persistence of HPV high-risk types can be crucial to the development of precancerous and cancerous lesions of the cervix, but not necessary for progression (Schiffman 2003, Woodman 2007).

Persistent infection before or after medical or surgical treatment or predisposes predicts cervical cancer as reported in a study by Kjaer in 2002, with a population of 10,758 women 20-29 years of age. (Kjaer 2002)

In this study we analyze the epidemiological risk factors involved in biological persistence of lesions low-grade cervical intraepithelial associated with HPV infection ablactivo posttreatment.

METHODOLOGY

We conducted an epidemiological study of cases and controls in the Dysplasia Clinic Specialty Hospital for Children and Women SESEQ, Dysplasia Clinic Hospital IMSS Regional Delegation and the Center Querétaro Querétaro Colposcopic with patients who came in the period from 1. From January 2010 to June 30, 2012.

Records included women over 18 years of age who presented or were referred by a medical unit assignment to the Dysplasia Clinic to present any abnormality to exfoliative cytology, and colposcopy or biopsy to cervical injury data found low-grade cervical intraepithelial associated with HPV infection, which merited electrofulguration ablactivo treatment, cryosurgery or diathermy loop excision.

Group 1 (cases): 40 patients with persistent HPV lesion at 6 months after treatment ablactivo

Group 2 (control): 80 patients were HPV injury data ablactivo posttreatment.

Persistence was defined as the lesion, the entire patient-6th. month of treatment was found on colposcopy, and histology / cytology, injury data even low-grade cervical intraepithelial as alterations in the transformation zone, white epithelium koilocytes and nuclear atypia with perinuclear halo

The analysis was performed using descriptive statistical measures of central tendency (mean, percentages), dispersion (range, standard deviation). With inferential statistical parametric tests such as the T tests for quantitative variables, nonparametric tests for qualitative variables and the chi square as well as measures of risk and the odds ratio with a confidence level of 95%

They accept a value of $p < 0.05$ as statistically significant.

RESULTS

The mean age was similar in both groups, in the cases was 32.55 years (SD 10.22) and controls 32.57 (SD 10.30), with a statistically non-significant, with $p > 0.05$, (95 % of -3988 to 3938), the most frequent age group in both groups was from 20 to 39, with 72%.

In the averages of the other quantitative variables (number of feats, weight and height were not statistically significant were worth all $p > 0.05$.

Where did there was a statistically significant p value < 0.05 for quantitative variables, was body mass index (BMI). Where in the case group, the mean was 27.39 (SD: 3.80), while the control group was 25.68 (SD 3.97) with an IC 95% of 0109-3294.

(Table 1)

Dichotomous nominal qualitative variables were analyzed with Chi-square test and Odds Ratio, the results were:

All socio-demographic factors (age, education, marital status, and place of residence) had no statistically significant difference ($p > 0.05$.)

Reproductive factors if they had a statistically significant $p < 0.05$ and a positive association (OR greater than 1) were: the onset of sexual activity before age 17, have had three or more sexual partners in the past three years, and the spouse or sexual partner's circumcision.

In the group of 16 cases (52%) initiated sexual activity before age 17, and in the control group 20 (28%) with a $p < 0.05$, an OR 2.77 (95% C.I. 1773-6640).

The history of having had three or more sexual partners in the past three years was in the group of cases of 6 (20%), while in control group 3 (5%) with a $p < 0.05$, an OR 5.25 (95% C.I. 1215-22685).

In the group of women who persisted injury after six months, 27 (87%) reported that the husband had circumcision, women in the control group as reported in 4 (13%) cases the p value was < 0.05 The OR of 3.45 (95% CI 1073-11116) (Table 2)

In addition, when women reported smoking in an isolated or independent were not statistically significant, but when combined reported both habits, if I become by far and positive association.

The Smoking associated with alcoholism was referred in 5 women (14%) of the case group and 2 (3%) in the control group, with $p < 0.05$, an OR 5.40 (C. I. 0993-29406 95%) (Table 3).

Nutritional factors obesity was positively associated with statistically significant difference in relation to the control group.

When comparing the two groups, with a cutoff mass index (BMI) of 25, there was no statistical difference, but when the cutoff was 30 (obesity) then if you had the strength and positive association difference between the two groups.

In the case group, 26 women (72%) were enrolled overweight or obese with a BMI of 25 or more, while in the control group 39 (57%) of women had normal weight, with $p > 0.05$, an OR 1.95 (95% C.I. 0817-4652)

When comparing only obesity (BMI of 30 or more) against the normal weight. The cases presented in 11 obese patients (52%), while the control group 10 (24%), with $p < 0.05$, an OR 4.58 (95% C.I. 0040-0020).

Co factors associated morbidity or pathology at the time of diagnosis or as background, the fact present with some other disease such as hypertension, diabetes, obesity, sexually transmitted infection etc. Just as having a history of frequent infections and cervicovaginal showed a significant association difference.

In the group of women with persistent HPV lesion, 12 (33%) reported a history of at least two infections on average over the past three years, while the group of women if the injury healed, 11 (15%) denied such a history, with a $p < 0.05$, an OR 2.81 (95% C.I. 1096-7244).

Also in the case group, 57% reported to course with other pathology at the time of diagnosis (diabetes mellitus, systemic hypertension, cervico vaginitis, obesity etc.) And in the control group (16% also was studying with some pathology, with a $p < 0.05$, an O: R: 6.97 (95% CI 2940-16534).

In relation to the extension of the cervical lesion at diagnosis, we evaluated the extension, in the group of women with persistent disease. 16 (52%) had an area greater than 2 cm². While the control group in 11 cases (11%) had that feature, if there was a statistically significant difference with a p-value < 0.05 , OR 8.53 (95% CI 2970-24514).

Table 1				
Mean Difference. Quantitative Variable				
	Cases	Controls	P*	C. I. to 95%
	Means (S.D.)	Means (S.D.)		
Age	32,55 (10.22)	32.57 (10.39)	0,990	-3.988 -3.938
Deeds	2.45 (2.26)	2.22 (1.94)	0.573	-0.564-1.014
Weight	66.72 (11.06)	64.16 (10.48)	0.245	-1.785-6.904
Size	155.90 (5.37)	158.26 (7.72)	0,104	-5.216 – 0.493
BMI	27.34 (3.76)	25.68 (3.97)	0.041*	0.071-3.248

• P: <0.05 Statically Significant (Student 's for independent samples)

Table 2					
Reproductive Factors					
Number of pregnancies	Case N= 40 (%)	Controls N= 80 (%)	O.R.	C.I. to 95%	P
Two or more pregnancies	26 (65)	46 (57)	1.37	0.625-3.014	0,554
Nulligravida or primiparous	14 (35)	34 (43)			
Total	40 (100)	70 (100)			
Home sex life					
Before 17 years	16 (52)	20 (28)	2.77	1.158-6.640	0,025
17 years or after	15 (48)	52 (72)			
Total	31 (100)	72 (100)			
Sexual partners in the last 3 years					
3 or more partners	6 (20)	3 (5)	5.250	1.215-22.685	0,025
2 or less partners	24 (80)	63 (95)			
Circumcision of husband					
Not	27 (87)	43 (66)	3.45	1.073-11.116	0.048
Yes	4 (13)	22 (34)			
*P: < 0.05 Statically Significant (Chi Square)					

Table 3					
Addiction					
	Cases N= 40 N %	Controls N= 80 N %	O.R.	C.I. to 95%	P
Tobacco					
Positive ***	6 (17)	7 (11)	1,94	0.593-6.182	0,347
Negative	30 (83)	67 (89)			
Total	36 (100)	74 (100)			
Alcoholism					
Positive **	6(18)	5 (7)	2.64	0.793-8.166	0,176
Negative	30 (82)	66 (93)			
Total	36 (100)	71 (100)			

Tobacco and Alcoholism					
Positive **	5 (14)	2 (5)	5.40	0.993-29.406	0.045
Negative	31 (86)	67 (95)			
Total	36 (100)	69 (100)			

*P: < 0.05 Statistically Significant (Chi Square)
 *** Tobacco and alcoholism Positive: At least 1 cigarette a day average
 ** Alcoholism Positive: Mínimum 3 average drinks per week

Table 4					
Extension of the lesion at the time of Dx. (Colposcopy)					
	Cases	Controles	O.R.	C.I. to 95%	P
	N= 40 N %	N= 80 N %			
Extensión of the lesion					
More than 2 cm2	16 (67)	7 (9)	8.53	2.970-24.514	0.000
Less than 2 cm2	15 (33)	56 (91)			
Total	31 (100)	63 (100)			

*P: < 0.05 Statically Significant (Chi Square)

DISCUSSION

Infection with human papillomavirus is sexually transmitted disease most common in the world and is a real public health problem for his very close relationship with uterine cervical cancer is a very labile viruses, but when it enters the cell or is removed by the female immune system represents a real threat for cancer, especially if it is a high risk virus.

There are many treatment modalities, all with a great diversity in their management methods being more ablactivos the therapeutic efficacy, the most used are cryotherapy, electro fulguration, and laser diathermy loop, however there are a number of patients who do not respond to treatment, and are those that also share some risk factors that prevent complete healing of the infection.

Several authors researchers have written about the risk factors for persistent infection with human papillomavirus, and why some are better or not responsive to medical or surgical treatment and have involved various factors, from the socio-demographic to sexual and those of each treatment.

This study examined various epidemiological and biological factors have been mentioned as associated with the persistence of cervical intraepithelial lesions associated with HPV infection, ablactivo posttreatment.

The average age of patients in both study groups after 6 months of treatment, was very similar, of 32.55 and 32.57 years for the case and control group respectively without statistically significant difference (p> .05).

The factors that were statistically significant ($p < 0.05$) and a positive association strength (OR greater than 1) for the persistence of the lesion were:

1. - Extension of the lesion greater than 2 cm². (O.R. 8.53)
- Two. - Presence of associated pathology. (O.R. 6.97)
3. - Smoking associated alcoholism. (O.R. 5.40)
- April. - Three or more sexual partners in the past three years. (O.R. 5.25)
- May. - Obesity (O.R. 3.41)
- June. - Spouse uncircumcised (O.R. 3.45)
- July. - Over two periods (average) annual sexually transmitted infections in the last three years (OR 2.81)
- August. - Home of sexually active less than 17 years (OR 2.77)
9. - The pathology associated with the group of patients who continued the lesion were cervicovaginal infection and obesity.

It is desirable that during the development of the medical history of the woman who goes by infection with Human Papillomavirus and treatment required ablactivo have in mind all the factors that increase the likelihood of persistence of the lesion, as demonstrated by literature and in the present work to influence those who are susceptible to change as obesity, sexually transmitted infections, smoking, alcoholism etc more.

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