

RESEARCH PAPER

Clinical, therapeutic, and sexual overview of women with Human Papilloma Virus and/or Cervical Intraepithelial Neoplasia

Panorama clínico, terapêutico e sexual de mulheres portadoras de Papiloma Vírus Humano e/ou Neoplasia Intraepitelial Cervical

Panorama clínico, terapéutico y sexual de mujeres con Virus del Papiloma Humano y/o Neoplasia Intraepitelial del Cuello Uterino

Escolástica Rejane Ferreira Moura*; Stephanie da Silva Veras**; Andreza Alves Dias***; Lidiane Nogueira Rebouças Aguiar****; Paula Sacha Frota Nogueira*****; Carolina Barbosa Jovino de Souza Costa*****

Abstract

Theoretical Framework: The infection by Human Papilloma Virus (HPV) and/or Cervical Intraepithelial Neoplasia (CIN) consists of a chronic degenerative disease of high morbidity and mortality.

Objectives: To identify the clinical stage of the HPV and/or NIC infections at diagnosis; verify the therapeutic and preventive measures conducted, including on the partner(s); and correlate changes in women's sexual behaviour after diagnosis.

Methodology: A cross-sectional descriptive research using interviews with 100 women with HPV and/or NIC, treated at the Cancer Prevention Institute of Fortaleza, Ceará, Brazil, between February and May, 2013.

Results: At diagnosis, 59.0% of women were in the clinical stage of HPV, of which 58.0% were treated with trichloroacetic acid, 25.0% underwent conisation and 12.0% electrocautery. After diagnosis, 20 (55.5%) women reported decreased libido; 15 (41.7%) mentioned lack of libido; 27 (60.0%) decreased frequency of sexual intercourse; 17 (37.8%) opted for sexual abstinence; 15 (46.9%) reported anorgasmia, and 14 (43.7%) experienced orgasmic dysfunction.

Conclusion: The care provided to these women should encompass listening and counselling specifically addressed to sexuality.

Keywords: papillomavirus infections; cervical intraepithelial neoplasia; women's health; sexual behavior.

Resumo

Enquadramento: A infecção pelo Papiloma Vírus Humano (HPV) e/ou Neoplasia Intraepitelial Cervical (NIC) caracteriza-se como uma doença crônico-degenerativa de elevada morbidade e letalidade.

Objetivos: Identificar o estágio clínico da infecção pelo HPV e/ou NIC ao diagnóstico; verificar medidas terapêuticas e preventivas realizadas, extensivas ao(s) parceiro(s); e relacionar mudanças no comportamento sexual das mulheres após o diagnóstico.

Metodologia: Pesquisa descritiva transversal, em que se realizou entrevistas com 100 mulheres com HPV e/ou NIC, atendidas no Instituto de Prevenção do Câncer de Fortaleza, Ceará, Brasil, de fevereiro a maio de 2013.

Resultados: Ao diagnóstico, 59,0% das mulheres estavam no estágio clínico do HPV, sendo que 58,0% foram tratadas com ácido tricloroacético, 25,0% com conização e 12,0% com eletrocauterização. Após o diagnóstico, 20 (55,5%) mulheres referiram diminuição da libido e 15 (41,7%) afirmaram ausência; 27 (60,0%) diminuíram a frequência sexual e 17 (37,8%) optaram pela abstinência sexual; 15 (46,9%) afirmaram anorgasmia e 14 (43,7%) disfunção orgásmica.

Conclusão: A assistência dessas mulheres precisa abranger a escuta e o aconselhamento voltado à sexualidade.

Palavras-chave: infecções por papillomavirus; neoplasia intraepitelial cervical; saúde da mulher; comportamento sexual.

Resumen

Marco contextual: La infección por el Virus del Papiloma Humano (HPV, por sus siglas en inglés) y/o Neoplasia Intraepitelial Cervical (NIC) se considera una enfermedad crónico-degenerativa de elevada morbilidad y letalidad.

Objetivos: Identificar el estadio clínico de la infección por el HPV y/o NIC en el momento del diagnóstico; comprobar las medidas terapéuticas y preventivas realizadas, y que abarcan a la(s) pareja(s), y relacionar los cambios en el comportamiento sexual de las mujeres después del diagnóstico.

Metodología: Investigación descriptiva transversal, en la que se realizaron entrevistas con 100 mujeres con HPV y/o NIC atendidas en el Instituto de Prevención del Cáncer de Fortaleza (Ceará, Brasil) de febrero a mayo de 2013.

Resultados: En el momento del diagnóstico, el 59,0% de las mujeres se encontraba en el estadio clínico del HPV. De estas, el 58,0% fue tratado con ácido tricloroacético, el 25,0% con conización y el 12,0% con electrocauterización. Después del diagnóstico, 20 (55,5%) mujeres señalaron una disminución de la libido y 15 (41,7%) afirmaron una ausencia; 27 (60,0%) disminuyeron su frecuencia sexual y 17 (37,8%) optaron por la abstinencia sexual; 15 (46,9%) indicaron anorgasmia y 14 (43,7%) disfunción orgásmica.

Conclusión: La asistencia de esas mujeres debe incluir la escucha y el consejo enfocados hacia la sexualidad.

Palabras clave: infecciones por papillomavirus; neoplasia intraepitelial del cuello uterino; salud de la mujer; conducta sexual.

* RN. Ph.D. Professor of the Nursing Department of the Federal University of Ceará, 60430-160, Fortaleza-Ceará, Brasil [escolpaz@yahoo.com.br]. Address for correspondence: Av. Filomeno Gomes, no. 80, Apto. 503, Jacarecanga, Fortaleza-Ceará, Brasil.

** RN. Federal University of Ceará, 60430-160, Fortaleza - Ceará - Brasil [stephanieveras@hotmail.it].

*** RN. Master student of the Postgraduate Nursing Programme of the Federal University of Ceará, 60430-160, Fortaleza-Ceará, Brasil [Andreza_ufc@yahoo.com.br].

**** RN. Master student of the Postgraduate Nursing Programme of the Federal University of Ceará, 60430-160, Fortaleza-Ceará-Brasil [lidiane.reboucas@hotmail.com].

***** RN. MSc. Professor of the Nursing Department of the Federal University of Ceará, 60430-160, Fortaleza - Ceará - Brasil [sachanogueira@hotmail.com].

***** RN. MSc. Dr. José Costa Institute, 60025-061, Fortaleza - Ceará, Brasil [carolinanafe@yahoo.com.br].

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Introduction

The Human Papilloma Virus (HPV) infects the skin and the mucous membranes, with more than 100 subtypes, 20 of which can infect the genital tract. These are divided into two groups, according to their potential for oncogenicity. When associated with other cofactors, the high oncogenic risk types are related to the development of intraepithelial neoplasia and cervical, vulvar, vaginal, anal and penile cancers. The low oncogenic risk types are associated with benign infections of the genital tract, such as the condyloma acuminatum or latum and low-grade intraepithelial lesions (Teles, Alves, & Ferrari, 2013). The prevalence of the various types of HPV in the population is very heterogeneous, ranging from 1.4% to 25.6% (Rama et al., 2008). This variety of prevalence is probably related to cases of underreporting and studies carried out in specific areas of greater vulnerability.

As the infection by HPV and/or Cervical Intraepithelial Neoplasia (CIN) is basically a sexually transmitted disease, with signs and symptoms affecting mainly the genital area, its diagnosis is expected to change women's sexual behaviour. In addition, when a person receives a diagnosis of HPV and/or NIC, he/she may present emotional changes linked to the relationship with the partner, leading to loss of sexual interest, constraints, changes in sexual behaviour and feelings of guilt or suspicion (Araújo, 2011).

Considering the above considerations, studies presenting an overview of the clinical behaviour and its implications for the daily lives of women diagnosed with HPV and/or NIC tend to help health professionals monitor and prevent such behaviours so that they can provide humanised and integral care. Therefore, this study was conducted with the purpose of identifying the clinical stage of the HPV and/or NIC infections at diagnosis; verifying the therapeutic and preventive measures conducted, including on the partner(s); and correlating possible changes in women's sexual behaviour after diagnosis.

Theoretical Background

HPV infection is characterised as a chronic-degenerative disease of high morbidity and mortality. Its evolution is slow, starting with small cell changes

which take, on average, 14 years to reach their most severe form, with metastases. Precursor lesions can be early detected on Pap smear, thus it is possible to reduce their incidence and mortality (Teles et al., 2013).

In most cases, these infections appear as symptomless (latent infection) or subclinical lesions (inapparent infection). When present, clinical lesions may be either flat or exophytic (condyloma). In the subclinical form, which corresponds to 80% of cases, they can be seen only through magnification using reagents such as acetic acid. When they are asymptomatic, they can be detected through molecular techniques, which consist of the identification of the viral DNA by means of molecular hybridization tests (Gagizi, 2010).

A case-control study conducted with 248 women diagnosed with HPV infection in the cervix, attending the public health network of Recife-PE, identified the infection as being in a subclinical stage in 100% of cases: the viral genotype of cervical infection was identified in 76.6% of the participants, with high-risk HPV genotypes (83.4% of cases and 67.1% of controls) being predominant, especially HPV 16 and 31 (Mendonça et al., 2010). This means that these are high percentages of detection in a subclinical stage, which corroborates the most widely spread strategy of diagnosis, i.e. magnification after the application of acetic acid.

Therefore, among the primary prevention measures for HPV infection and, consequently, Cervical Cancer (CC) are measures for the promotion of healthy sexual behaviours, including safe sex, which consists of the proper use of male or female condoms in all sexual relations, decreased number of partners, and practice of monogamy by the couple (Melo, Prates, Carvalho, Marcon, & Pelloso, 2009). It should be noted that safe sex also encompasses sexual intercourses without the use of condoms, provided that the couple is mutually monogamous and that no spouse has become infected before the beginning of the current relationship.

In this sense, a study carried out with 39 women with HPV, in the municipal area of Fortaleza-CE, found that 13 women (33.0%) did not use condoms during their sexual intercourses and 10 (26.0%) used condoms casually. In relation to the number of sexual partners, 20 women (51.3%) had had between two and four partners over the last year. As regards the sexual practices performed prior to the diagnosis of

infection by HPV, 21 women (53.9%) reported the practice of vaginal sex, 13 (33.3%) vaginal and anal sex, and 5 (12.8%) oral and vaginal sex (Machado, Araújo, Mendonça, & Silva, 2010).

Secondary prevention of HPV and, therefore, CC is performed through the Pap smear test for early detection of the virus and possible changes in the female genital organ.

An exploratory descriptive study conducted with 114 women from the Family Health Strategy (*Estratégia Saúde da Família* – ESF) of Iporá, Goiás, Brazil, showed that the largest adherence was in the age group of 46 to 50 years (24%) and the lowest adherence was in the age group of 18 to 20 years and 41 to 45 years (10%). Among the interviewees, 70% had the Pap smear every two years or less and 12% never had it (Oliveira et al., 2012).

In view of the above, it is important to develop studies in the area of HPV infection involving women with HPV themselves, since they are partly responsible for preventing and controlling the disease.

Research Questions

In light of the foregoing, the following questions were drawn up: In which clinical stage was the HPV diagnosed in the main reference service for cervical cancer prevention in Ceará? Does the infection by HPV and/or NIC cause health-promoting changes to these women's sexual behaviours?

Methodology

A cross-sectional descriptive study was conducted at the Cancer Prevention Institute (*Instituto de Prevenção do Câncer* - IPC) in Fortaleza, Ceará, Brazil. The population was composed of the women with a diagnosis of HPV and/or NIC who attended the institute. Through a process of consecutive random sampling, a total of 100 participants were selected, which represented a confidence level of 95% and an absolute sampling error of 10% considering 50% of the occurrences of clinical and demographic characteristics to be analysed.

The following inclusion criteria were adopted: women aged 18 years or more (age of majority), with a diagnosis of HPV and/or NIC registered in

their clinical record. With regard to the last criterion, it must be noted that all cases that included both the HPV and NIC designations in their clinical files were considered as having an HPV diagnosis. This is because the infection by oncogenic subtypes of HPV is a determining factor for the emergence of these precursor lesions as studies show that infection by the virus always precedes the beginning of intraepithelial lesions (Fonseca, Tomasich, & Jung, 2012).

Data were collected through the identification of clinical records of women who met the inclusion criteria. Subsequently, these women were asked to participate in the study while they waited for an appointment in the waiting room. The interviews took place in a private room, which had previously been prepared in accordance with the service management. A form which had been previously designed and tested with five women, who were not part of the sample, was used in these interviews. The form included questions on demographic and socio-economic information, such as age, education, family income and number of household members; clinical stage of HPV at diagnosis; therapeutic and preventive measures focused on HPV and/or NIC, extended to the partner; and changes to these women's sexual behaviour after diagnosis. A field diary was used to register relevant situations which had not been covered in the interview form.

Data were entered into Excel for Windows and exported to the Software Statistical Package for Social Sciences for Personal Computer (SPSS-PC), version 11.0, where they were organised into tables. A descriptive statistical analysis was performed using the relative and absolute frequencies, mean and standard deviation calculations.

The women received information on the study objectives, their anonymity and the right to withdraw from the study at any time. The research was approved by protocol no. 196.840.

Results

The participants' age ranged between 18 and 75 years, with a mean of 32.8 (± 13.1) and a predominance of age range of 25-35 years (43.0%), followed by the age range of 20-24 years (21%). As for education, the middle education level (either incomplete or complete) was the most prevalent (57.0%). Most

women did not work outside the home (57.0%), and the monthly per capita family income was, on average, 2.6 (± 0.7) Brazilian minimum wages, with a greater prevalence of the family income “up to 1/2 minimum wage” (52.0%). It should be highlighted that, at the time of this study, the Brazilian minimum wage was R\$ 678.00.

With regard to the clinical stage of infection by HPV diagnosis, 59.0% of participants corresponded to the clinical stage (condyloma), followed by the subclinical stage (37.0%) and the asymptomatic stage (4.0%).

This group of women had been diagnosed with HPV and/or NIC from less than one month to 11 years

ago, with a mean of 2.5 years (± 4.3). This result may confirm the permanence of diagnosed women in the health care system due to the need for long-term follow-up, as necessary to control the infection.

There was predominance (58.0%) of application of trichloroacetic acid (TCA), followed by 25.0% of women who underwent conisation. As regards the therapeutic and preventive measures conducted, 46.0% underwent colposcopy and 42.0% underwent cytology. The partners of 36.0% of women were notified to participate and received guidance from the nursing staff (Table 1).

Table 1

Distribution of women according to the HPV therapeutic and preventive measures conducted, including on the partner(s). Fortaleza-Ceará, 2013. (n = 100)

Variables	No.	%
Treatment adopted by the woman*		
Application of TCA	58	58.0
Conisation	25	25.0
Electrocautery	12	12.0
No record	9	9.0
Other	3	3.0
Prevention and control strategies /adopted by the woman*		
Colposcopy	46	46.0
Cytology	42	42.0
Partner participation	36	36.0
Nursing guidance	36	36.0
No record	22	22.0
Vulvoscopy	1	1.0
Therapeutic measures extended to the partner		
No record	90	90.0
Peniscopy	10	10.0

*For these categories, more than one answer was accepted; the answers concerning the variable were summed and the frequencies of the study sample were calculated, which resulted in n greater than 100.

After the diagnosis of HPV and/or NIC, 20 women (55.5%) reported decreased libido and 15 (41.7%) mentioned lack of libido; 27 (60.0%) reported decreased frequency of sexual intercourse and 17

(37.8%) opted for sexual abstinence; 15 (46.9%) reported anorgasmia and 14 (43.7%) experienced orgasmic dysfunction; 16 (40.0%) stopped oral sex and 12 (30.0%) stopped anal sex (Table 2).

Table 2

Distribution of women aware of their HPV diagnosis according to changes in sexual behaviour after the diagnosis. Fortaleza-Ceará, 2013.

Variables	No.	%
Change in sexual desire (libido) (n= 36)		
Decrease	20	55.5
Absence	15	41.7
Increase	1	2.8
Interference with the frequency of sexual intercourse(n= 45)		
Decrease	27	60.0
Sexual abstinence	17	37.8
Increase	1	2.2
Change in the pleasure during sexual intercourses (orgasm) (n= 32)		
Absence (anorgasmia)	15	46.9
Increased difficulty	14	43.7
Decreased difficulty	3	9.4
Change in the type of sexual practice (n= 28)		
Stopped oral sex	16	57.1
Stopped anal sex	12	42.9

Discussion

The high concentration of HPV and/or NIC cases in the reproductive age (43.0%) leads to the discussion on the association between HPV, pregnancy and newborn health. It is known that HPV is associated with laryngeal and pulmonary papillomatosis in newborns. The latter has a severe evolution and, although rare, it is characterised as an uncontrolled and fatal infection (Reis, Paula, & Cruz, 2010).

As regards the participants' age, similar results were found in a survey that was also conducted in the municipal area of Fortaleza with 39 women who had HPV cervical lesions and whose predominant age range was 20-29 years (56.4%) (Machado et al., 2010). Another study carried out in the cities of São Paulo-SP and Campinas-SP, with 2300 women who sought screening for CC, found a mean age above that which was found in Fortaleza-CE, i.e. 35.7 years (Rama et al., 2008).

Other authors also investigated the level of education aiming at similar target audiences and found a lower education level than the one obtained in this group (middle education). A study carried out in the City of Rio de Janeiro-RJ with 120 women diagnosed with Precursor Lesions of Cervical Carcinoma and results suggestive of HPV infection identified a prevalence

of primary education among participants (Carvalho & Queiroz, 2011).

In turn, the percentage of participants who did not work outside the home (57.0%) may have influenced the low income per capita detected. A study conducted with 299 women from Vitória-ES, with the aim of describing prevalence rates and the clinical and behavioural profile of genital infections in women attending a basic health care unit, identified a lower percentage of housewives, i.e., 35.7% (Barcelos, Vargas, Baroni, & Miranda, 2008).

Thus, the findings relating to the education and family income of the group under study corroborate the literature, which suggests that the low socio-economic status and low education levels are risk factors for the development of CC and, consequently, infection by HPV and/or NIC.

As regards the clinical stage of infection, there was a high percentage of late diagnosis, i.e. the clinical phase of HPV (condyloma) (59.0%). This finding may relate to cultural aspects which influence women to only seek the health care services when the signs and symptoms of the diseases appear, also as a result of the fear and shame felt in dealing with their own body. Specifically relating to HPV, a study carried out with women with this virus, in Fortaleza-CE, stated that misleading conceptions based on cultural aspects, such as myths and taboos, have great significance for

individuals. This may be a barrier in accessing health care services, as well as a barrier to the professionals' performance in health promotion and disease prevention (Sousa, Pinheiro, & Barroso, 2008).

The asymptomatic stage corresponded to 4.0%, when it should correspond to most diagnoses, since the early detection of HPV and/or NIC should be the goal of CC prevention services.

In a statistical survey of 106 cytological records issued by the Laboratory of Pathological Anatomy of the Hospital Universitário Sul Fluminense (HUSF), 77.4% were associated with the occurrence of HPV infection in the subclinical stage and 2.8% corresponded to the invasive carcinoma (Monte & Peixoto, 2010).

The therapeutic measures available to treat the HPV-related condylomata are: TCA, podophyllin, cryotherapy, electrocoagulation and surgical exeresis. The TCA, in particular, is a caustic agent that destroys condylomata through the chemical coagulation of its protein content (Gagizi, 2010).

A retrospective cohort study carried out at the Health Care Centre-School of Porto Alegre – RS with 372 women with intraepithelial lesion found a prevalence of 70.2% of low-grade lesions and 29.8% of high-grade lesions and invasive cancer. In total, 68.2% women underwent colposcopy and 48.1% underwent biopsy. Also, 8.8% of the women who were told to repeat the colposcopy did it in less than a year. In the follow-up, 20.7% underwent conisation, 1.9% underwent hysterectomy and 78.2% of the low-grade changes had a normal cytology when repeated for the second time (Peres, Menezes, & Oliveira, 2011).

Moreover, it is known that ensuring a timely treatment and an appropriate follow-up to patients with HPV can have a positive impact on the epidemiological profile of CC by reducing their morbidity and mortality rates (Albuquerque et al., 2009).

It was found that 10% of the surveyed women's partners underwent peniscopy, although 36.0% had been notified to go to the health care centre.

As for the infection by HPV in the male population, that 3 to 6 million men are infected by the virus in Brazil. Among the three possible ways in which HPV can manifest itself, the subclinical form is the most common in men. In turn, the diagnosis must consider the patient's clinical background and a thorough physical examination. It may also include additional examinations, such as the peniscopy and an inspection with 5% acetic acid. Together, they

identify lesions 14 to 16 times better (Chaves, Vieira, Ramos, & Bezerra, 2011).

Sexual behaviour may be understood as the types of sexual activities practiced by an individual, which involve aspects related to sexual desire, frequency and pleasure. When it comes to female sexuality, it involves much more than the simple sexual intercourse, as it may be influenced by psychological, emotional and sociocultural aspects (Minotto, 2009).

A study carried out with 78 women, with NIC I, II, III, and condylomata acuminata, at the Hospital das Clínicas de São Paulo, found that 60.2% of participants showed no changes in libido. However, 36.5% did report decreased libido after the HPV diagnosis, which is a lower percentage than the one found in the present study (55.5%) (Minotto, 2009).

With regard to the impact of HPV diagnosis on the frequency of sexual intercourse, a survey conducted with 12 women at an outpatient clinic for Sexually Transmitted Diseases (STD), in Fortaleza-CE, with the purpose of identifying the participants' feelings as they underwent treatment for HPV lesions, found a similar result to the present study. According to this study, 60.0% of women showed decreased frequency of sexual activity as a result of the diagnosis of HPV infection (Carvalho et al., 2007).

With regard to change in sexual pleasure (orgasm), 46.9% of participants reported anorgasmia and 43.7% experienced orgasmic dysfunction, i.e., almost all women had negative changes in terms of orgasm. The previously mentioned study found that 36.0% of participants experienced reduced orgasm intensity (Minotto, 2009).

In relation to changes in the types of sexual practice, 16 women (40.0%) stopped practicing oral sex, 12 (30.0%) stopped anal sex and 12 (30.0%) opted for sexual abstinence. The abovementioned study found lower results as only 11.7% of women stopped practicing oral sex after they were diagnosed with HPV infection (Minotto, 2009). The absence of changes in sexual practices may be related to the participants' lack of knowledge about how HPV is transmitted, since the virus can also be transmitted via anal and oral sex, through the direct contact of the genital organs during the sexual intercourse without the use of condoms (Rosa et al., 2009). Another aspect may be related to the social relations of gender, in which male power stands out, thus preventing changes in women's sexual practices.

The under-recording in clinical records, as well as the existence of indecipherable records by physicians should be highlighted as study limitations.

Conclusion

Most women with HPV and/or NIC under study have predominantly low incomes, no professional activities outside of the home, middle education and had a late diagnosis of the infection. The application of trichloroacetic acid was the most highly recommended treatment. Some women reported change in libido, frequency of sexual intercourse, orgasms and sexual practices after the diagnosis. Few partners were notified and there was virtually no record of male follow-up in the women's clinical files. Therefore, this study calls attention to the nursing care provided to these women, which should encompass listening and counselling procedures specifically addressed to sexuality, as well as include these women's partners as being at a potential risk for HPV infection. Thus, both women and men should undergo a diagnostic, therapeutic where relevant, and educational assessment.

For people with HPV and/or NIC to be able to achieve a good health status, it is essential for them to acquire knowledge related to the promotion of healthy lifestyles and safe sex practices.

Future studies should aim at intervening to empower these women in terms of their sexual activity after the treatment is completed. They can also be carried out in private services and with other population groups.

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