

THE IMPORTANCE OF THE DENTISTRY PROFESSIONALS' PARTICIPATION IN THE COPING STRATEGIES WITH THE HUMAN PAPILLOMAVIRUS (HPV) INFECTION

Epidemiological studies have shown that infection by the Human Papillomavirus (HPV) is characterized as pandemic. Therefore, it constitutes a serious public health problem⁽¹⁾.

HPV does not observe cultural, social or economic rules, unlike certain infections that affect the economically disadvantaged countries, challenging the best health systems. The HPV oncogenic activity is responsible for 28% of all types of cancer associated with infections in the world. Studies in Brazil indicate that HPV, as a persistent infection, is responsible for almost all cervical cancers and numerous other malignancies in different organic sites as vulva, vagina, anus, penis and oropharynx. In Brazil, the oropharyngeal carcinomas associated with this virus represent 72%. In the United States, in Australia and in Northern Europe, the percentage corresponds to 50% of all cases^(2,3).

Then, the perception of relations of HPV infection with carcinogenesis in various areas of the human body significantly demonstrates that the responsibility for preventive measures, diagnosis and treatment of the disease involves medical and dental care, nurses and nursing assistants for the actions they develop with patients, indispensable in the multidisciplinary strategies. It is worth emphasizing what does not always stand out in the literature: the important participation of dentistry, given the significant HPV relationship with premalignant lesions and squamous cell carcinoma of the oral cavity, the most frequent malignant tumor in this location⁽⁴⁾. This verification fully justifies the important inclusion of these professionals in the coping strategies with HPV infection that we discuss in this editorial.

Motivated by the HPV theme, a questionnaire was developed with 52 assertions to be answered by students of various academic training periods while preserving the identity of the participants. The sample, involving 249 dentistry students spread from first to ninth periods, represented five training centers of the state of Rio de Janeiro, Brazil. The questionnaire was applied in the classrooms, with spontaneous adhesion of the participants. The purpose of the research was initially described and followed by information about the epidemiology of HPV infection and its consequences to the population, reinforcing the importance of the dentistry participation in prevention, diagnosis and treatment of the epidemic. The constituent parts of the questionnaire involved assertions about the HPV virus, ways of transmission, infection-related diseases, incidence, prevention, symptoms, treatment and vaccines. The answers were statistically analyzed in percentage terms as to the errors and successes on the elaborated assertions.

Objectively, the study concluded that there are important knowledge gaps in relation to HPV infection, especially concerning the

recognition of the oncogenic virus capacity, differential diagnoses, as well as vaccines and vaccination schedules.

This study involving only dentistry students represents a unique work not yet found in the systematic bibliographical review with similar characteristics.

Considering such findings, we suggest that the Ministry of Health, as the main government agency responsible for the health of the Brazilian population, develops national researches with dentistry professionals covering not only the HPV infection, but also many other diseases in which dentists along with doctors, nurses and their assistants can make a task force to achieve prevention, diagnosis and treatment.

Specifically for the construction of a wider strategy joined with the population, the participation of people involved in the social media, such as community leaders, religious in general, influencers on informational pages in social networks, official and unofficial, and especially professional groups of communication media, such as newspapers, magazines, radio and television, is a fundamental element to strengthen health professionals, and to become a popular, great and effective mobilization^(5,6).

In addition, it is clear that HPV infection needs the participation of several health professionals, demanding actions informed by multidisciplinary clinical examination of the patient whom anamnesis identifies sexual practices of cunnilingus, fellatio and anilingus, requiring the physical examination of the oral cavity in order to look for changes in the mucosa by HPV infection.

The main changes in the oral mucosa caused by infection with HPV may be benign or malignant caused by various kinds of viral family and express themselves clinically by papilliferous growths (*Oral squamous papilloma*), verrucous (*Verruca vulgaris*), whitish boards (leukoplakias), rounded volume increase, sessile with rosy projections and dull surface (*Condyloma acuminatum*), crateriform ulcers of irregular periphery with high and hardened edges attached to underlying structures (*Squamous cell carcinoma*), or irregular growths with verrucous/papilliferous surface (*Verrucous carcinoma*)^(4,7).

All intraoral regions and the lips may virtually show clinical manifestations resulting from HPV infections. HPV lesions in the oral cavity result mostly of oral sex practice and rarely by the virus translocation from one lesion to another area through the habit of putting fingers into the mouth, especially regarding common warts in children⁽⁵⁾.

Another important point to be noted is that sexual practices involving the mouth are not properly mentioned in public health education programs, causing a negligence regarding the use of preventive barriers by practitioners of oral sex. For the practice of fellatio, the male condom use is an effective and necessary preventive⁽⁵⁾. About the

practice of cunnilingus and anilingus, there are no mechanical barriers commercially available. In such situations, polyvinyl chloride (PVC) film cut-outs or rubber sheets used in dentistry are suggested as mechanical barriers to cover the female genitalia and the anus to avoid direct contact of the mouth, especially the tongue, with these regions. The use of these ways of prevention is very small, indeed true anecdotal.

In Brazil, dentistry was historically characterized by an action mostly dissociated from medical and nursing activities, as if the mouth was not an integral and connected part of the human body. This independence of action was largely shaped by market interests, blaming the training centers of dental professionals for not giving priority in their curricular grids to the integration with schools of medicine and nursing. Within this striking Brazilian reality, it is observed there are rare dental schools interconnected with hospitals, making distant the professional integration and consequently causing the weakening of multidisciplinary actions in public health.

To reinforce the main purpose of this editorial about the importance of dentistry professionals' participation in the coping strategies with the HPV infection, we report official numerical data describing the profession in Brazil. The Federal Council of Dentistry of Brazil, in 2018, informed there were 306,789 dentists working, and 220 dentistry schools spread out in every state of the country, including the Federal District^(8,9). Approximately 11,000 new professionals arrive annually at the labor market. According to the Regional Dentistry Council of Rio de Janeiro (CRO-RJ), 31,215 dentists are regularly registered in the municipality, and 19,294 of them are women⁽¹⁰⁾. This numerical preponderance of female professionals is dominant all over Brazil.

Extending the observation of the strong feminization of dental professionals, it is observed that in other countries of the world this statement is also evident, as follows: women currently represent 40% of the population of dentists in the Netherlands. Based on the participation of educational programs, it is estimated that this number exceeds the 50% in the coming years⁽¹¹⁾. In the United States, 42% of students in dentistry are women; in Finland, 75% of dentists are women. Women dentists in Russia are 48% of the workforce. In the United Kingdom, 50% of new freshmen in undergraduate courses in dentistry are women. In India, the same occurs between students, and about 50 to 60% of pupils in all schools of dentistry are female⁽¹²⁾. In Spain, among 26,725 dentists operating in the country, 44.37% are female⁽¹³⁾.

We believe that the magnitude of these numbers is strongly appealing, so that the Brazilian public administrators of health prevention and education become alert and add the dental professionals in their health planning strategy.

It is also important to note that most women favor preventive gynecological examinations in their routines of personal care, and medical experts in this area are extremely engaged in coping with HPV infection, especially due to the viral relation with cervical cancer.

Finally, dentistry would for sure interact with other professions and medical specialties and would promptly meet the government call to participate in public health actions on HPV infection.

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Conflict of interests

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