Anal cancer: an essay on etiology, risk conditions, vulnerability, and care of carriers

Câncer anal: um ensaio sobre etiologia, condições de risco, vulnerabilidade e cuidados aos portadores

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ABSTRACT

Introduction: The incidence of anal cancer is influenced by individual factors and socially determined conditions of vulnerability. In Brazil, it has increased in recent decades. A probable explanation for the growing incidence is the low coverage of screening and prevention programs. **Objective:** The aim of this study was to reflect on risk factors, the need for early diagnosis, and care of people with anal cancer and to associate social vulnerability in the understanding of illness and care in the Unified Health System (SUS). **Methods:** This is a systematic literature review with consultations carried out in open electronic databases: SciELO, Digital Library of Theses and Dissertations, and CAPES Publications Portal. The descriptors used were "anal cancer," "anal cytology," "anal cancer precursor lesions," "primary prevention," "integrality in health," and "public health policies." **Results:** Ensuring access to services is a common guideline in the literature. Based on the recovered references, two axes of analysis were built: in the first, ideas to reflect on care with collective health approaches were systematized, mainly on the etiology, biological risk factors, and conditions of vulnerability for cancer development to which the subjects are exposed. In the second, ideas to propose care technologies are put forward, with evidence from similar protocols and policies, especially the "Cervical Cancer Control Program," which deals with a pathology with cytohistological and etiological similarities, risk factors, diagnostic techniques, and skilled health professionals. **Conclusion:** The reviewed sources point to the possibility of incorporating, as a SUS policy, large-scale actions of prevention, screening, and early diagnosis, to qualify and expand the initiatives of promotion and care. The professional cytotechnologist can be a decisive factor in the implementation of the care policy, expanding assistance to the population and qualifying the services.

Keywords: Primary health care. Primary prevention. Integrality in health. Health policy. Anus neoplasms.

RESUMO

Introdução: O câncer anal tem incidência influenciada por fatores individuais e condições de vulnerabilidade socialmente determinadas. No Brasil, apresentou crescimento nas últimas décadas. Uma provável explicação para a incidência é a baixa abrangência dos programas de rastreamento e prevenção. **Objetivo:** Refletir sobre fatores de risco, necessidade de diagnóstico precoce e cuidado às pessoas com câncer anal, bem como compreender a relação entre vulnerabilidade social, adoecimento e cuidados no Sistema Único de Saúde (SUS). **Métodos:** Trata-se de uma revisão sistemática da literatura, com consultas realizadas em bases de dados eletrônicas abertas: SciELO, Biblioteca Digital de Teses e Dissertações e Portal de Periódicos CAPES. Os descritores utilizados foram "câncer anal", "citologia anal", "lesões precursoras do câncer anal", "prevenção primária", "integralidade em saúde" e "políticas públicas de saúde". **Resultados:** A garantia de acesso aos serviços é orientação comum na literatura. Com base nas referências recuperadas, foram construídos dois eixos de análise: no primeiro, foram sistematizadas ideias para refletir sobre o cuidado com abordagens da saúde coletiva, principalmente sobre a etiologia, fatores de riscos biológicos e condições de vulnerabilidades para desenvolvimento do câncer ao qual os sujeitos estão expostos. No segundo, foram sistematizadas ideias para propor tecnologias de cuidado, com evidências de protocolos e políticas modelo, principalmente o Programa de Controle de Câncer de Colo do Útero, que trata de patologia com semelhanças cito-histológicas e etiológicas, considerando fatores de risco, boas técnicas para diagnóstico e a qualificação dos profissionais de saúde habilitados. **Conclusão:** As fontes revisadas apontam a possibilidade de se incorporar, como política do Sistema Único de Saúde, ações de prevenção, rastreio e diagnóstico precoce em ampla escala, a fim de qualificar e expandir as iniciativas de promoção e atenção ao público. O profissional citotécnico pode ser um fator decisivo na implantação da política de cuidado, ampliando a assistência à população e qualificando os serviços prestados.

Palavras-chave: Atenção primária à saúde. Prevenção primária. Integralidade em saúde. Políticas públicas de saúde. Câncer anal.

INTRODUCTION

Malignant tumors of the anus occur in the canal and on the outer edges and develop in different types of tissues, although they are more common in squamous tissue, characterizing squamous cell carcinoma, responsible for approximately 85% of cases[1].

Similar to what happens in assistance programs for the female population in relation to cervical cancer, the control of anal cancer can also be supported by cytotechnology. This area consists of a set of practices and scientific knowledge and the incorporation of specific techniques for the interpretive analysis of cytopathological tests[2,3].

To ensure quality when obtaining adequate samples, high-resolution anoscopy can also be implemented to improve visualization of the transformation zone (TZ) and guide the collection of cytological material, as the magnifying glass, coupled to the device, enables the image to be magnified several times, revealing lesions that are not visible to the naked eye. Both cytology and anoscopy are simple, noninvasive tests that can be performed in different types of health facilities, especially for individuals at increased risk for anal canal cancer[4,5].

The principle of anal cytology is to identify alterations in cell morphology by comparing microscopic images of normal cells recorded in memory and/or in various printed or digital materials with images of unknown cells. After analysis and diagnostic conclusion, nomenclatures established by the Bethesda System are assigned[6].

Despite the success of the cytological technique, especially in the control of cervical cancer, which has been widely studied and for which there is evidence of a significant drop in the incidence of

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cervical carcinoma in regions where there is a continuous prevention program for the disease, the technique of anal cytology is relatively recent and used more frequently for screening a small proportion of the population: individuals considered at risk, such as people who practice receptive anal sex without proper protection or people living with the human immunodeficiency virus (HIV), often referred to as "HIV+"[4,7]. The incorporation of actions of promotion and protection, early diagnosis, and adequate treatment in the different points of attention of the health system could benefit people, communities, and the health system, insofar as it reduces treatment costs and social impacts, expanding the comprehensiveness of care[8].

Among the initiatives to expand care, the training of cytotechnology professionals and the prospect of incorporating care for people with anal cancer in the routine of services poses challenges to training and the design of public policies, making it very relevant to reflect on the context in which the disease occurs and the possibilities of health care in the Unified Health System (SUS)[9,10]. It seems opportune, however, that the reflections have an interdisciplinary scope, involving knowledge about the disease and its risks and health care policies in the SUS, articulating perspectives to support initiatives. This assessment is based on the fact that there is a greater advance in knowledge about the biological aspects of the disease than the initiatives incorporated into care policies for individuals and communities.

OBJECTIVE

This theoretical essay aimed to reflect on risk factors, early diagnosis, and care for people with anal cancer or those subject to developing it, seeking subsidies for a public policy of care in SUS services starting from primary care, in addition to associating the approach of social vulnerability to expand the concept of a risk group in understanding the risks and conditions of illness in health care planning.

METHODS

This is a systematic review with a search carried out in different electronic databases in the public domain: SciELO (Scientific Electronic Library Online), Digital Library of Theses and Dissertations, and electronic journals of the Coordination for the Improvement of Higher Education Personnel (CAPES Publications Portal). The research question, from which sources were selected and concepts and ideas were treated, was as follows: "What knowledge about the prevention, diagnosis, and treatment of anal cancer can support the regular care of people in the SUS service network?"

Through the search engines of the respective databases, the terms "anal cancer," "anal cytology," "precursor lesions of anal cancer," "primary prevention," "integrality in health," and "public health policies" were searched in Portuguese, registered in DeCS (Descriptors in Health Sciences). The Logical operators "AND" and "AND NOT" were used for two-by-two combinations of the descriptors and terms used to track publications, in such a way that the last two were always associated with the others.

From the search, 131 publications were retrieved between January 2000 and December 2020. The abstract of the manuscripts was read to understand the approach of the author(s) and, eventually, the Introduction, Objectives, Methods, and/or Discussion, restricting the analysis to the objectives of this research. After examining the degree of correspondence between the methods and techniques used and the conclusions observed, 51 publications were discarded that did not contain information in the title and abstract on direct (the direct record of anal cancer) or indirect relationships (the citation of conditions associated with diagnosis and treatment of anal cancer) and that did not contribute to answering the question of this research. A further eight duplicate articles and three cross-texts were also removed, as articles derived from theses/dissertations that had already been selected. Of the 80 remaining publications, 32 were selected because they correspond to the desired subject, allowing the analysis intended in this investigation. The final publications included original and review articles, book chapters, theses, and dissertations and were selected because they met the following inclusion criteria:

1. publications should address anal cancer with emphasis on etiology, risk factors, and vulnerabilities to analyze care actions;
2. publications that contained analyses and subsidies for a public policy of care for people with anal cancer; and
3. publications carried out in the period from 2010 to 2020, which allowed the incorporation of a historical period of 10 years of productions.

As this is documentary research, it is exempt from approval by the Research Ethics Committee (CEP), according to resolutions nº 466/2012 and 510/2016 of the National Health Council. The work has no conflict of interest.

RESULTS AND DISCUSSION

The references retrieved in the search allowed us to systematize, from the thematic analysis of the contents, two axes of analysis, which detail the scope of actions and forms of organization in the services and local health systems, based on an idea among the consulted references, which is the fact that access to health services and quality actions is essential to seek initiatives capable of reducing the incidence and individual and social cost associated with anal cancer. The axes of analysis are systematized below.

Anal cancer: etiology, risk factors, and vulnerabilities

Anal cancer is a pathology still considered rare in the general population. However, over the past few decades, the growth in registered cases has become a matter of concern for health authorities and the scientific community, encouraging new studies that accompany the epidemiological transition in several countries, including Brazil, evidencing the expansion of morbidity and mortality due to neoplasms, which is challenging health managers[5,11]. That is, the demographic and epidemiological transition of societies points to the prospect of a growing increase in cases and it is opportune to anticipate primary and secondary prevention policies in health systems and services, especially in situations where there is similarity with procedures already adopted as routine in services.

At the national level, there is an aggravating factor, in that the incidence and mortality data are not clearly known, perhaps because cases of anal cancer are registered together with colon and rectal

cancer. It is estimated that, in both men and women, these cases represent 1–2% of all colorectal tumors[1,12,13]. Adequate recording and adequate analysis, for evaluation and monitoring, make up highly relevant actions in health policies, and this finding covers anal cancer and the contextual conditions in which it is manifested[11].

The development of anal cancer is multifactorial. Most of the risk factors for this neoplasm are associated with the life habits of people and communities, clinical aspects, and social vulnerabilities. A higher incidence in the emergence of this neoplasm is observed in: carriers of sexually transmitted infections (STIs), especially the human papillomavirus (HPV), and the HIV, responsible for acquired immunodeficiency syndrome (AIDS); immunosuppressed states; individuals aged over 50 years; smokers; transplant recipients; patients with chronic anal lesions that evolve with inflammation (e.g., fissures, fistulas, and hemorrhoids); patients with anal cancer related to genetic factors; precarious hygiene conditions; and, finally, socioeconomic level[1,14-16].

Special attention is usually given to factors related to sexual behavior, considered the preponderant for the development of intraepithelial lesions and, consequently, of invasive cancer, which is HPV. The theory is confirmed by the results of molecular tests that identified HPV deoxyribonucleic acid (DNA) in atypical tumor cells in up to 90% of patients with the neoplasm. National epidemiological data also corroborate the information: in Brazil, there is a high positive correlation between hospitalizations for anal cancer and HPV[5,17-22].

This attention is due to the alterations that precede anal cancer, caused by the virus, and can be identified by cytopathological examination. At this stage, the role of different health professionals in prevention programs and campaigns, including the cytotechnologist, is essential to reduce deaths from preventable causes[9].

HPV has been identified as the most recurrent STI in the world among men and women of different ages. This virus is more common in developing countries and among young individuals, probably due to sexual activity and changes in sexual behavior patterns in recent decades[5,22,23].

The most important factor for HPV infection, described in the literature, is the number of sexual partners: the greater the number of partners, the greater the risk of acquiring the virus. Sexual activity with just one partner who has or has had multiple partners is also linked to infection[5]. In other words, the "statistical risk" is unsafe sexual practice, especially when considering penetrative sexuality, performed with partners for whom there is no reliable information about previous contact with virus carriers. It is superimposed, therefore, on the culture of societies and on the sexual and reproductive education guidelines that are offered in each context and territory.

Anal cancer is preceded by a long phase of preinvasive disease, caused by persistent infection with one or more oncogenic types of HPV. The alterations caused are called anal intraepithelial neoplasms (AIN), similar to cervical intraepithelial neoplasms (CIN), and are classified according to the severity and proportion of involvement in the epithelial tissue and may be AIN I (low-grade lesion), caused by low-risk HPV, and AIN II and AIN III (high-grade lesions), caused by high-risk HPV. When precursor alterations occur in the glandular tissue lining the lower rectum, they are called adenocarcinomas in situ, which give rise to invasive adenocarcinoma[14,24]. These alterations represent an important period for secondary prevention actions, with early diagnosis and health promotion actions.

Other factors have been associated with the development of anal cancer, configuring risk groups and requiring more attention from the health system. HIV is indicated as one of the main associated comorbidities. Studies have explored the prevalence of anal cancer in immunocompromised people, including those living with HIV[16].

Despite the improvement in treatment with the application of antiretroviral therapies, configuring a change in the panorama when compared to the 1980s and 1990s, AIDS still represents one of the main epidemics and public health problems worldwide. In developing countries, it is associated with difficulties in accessing health services, economic crises, population migrations, and deficiencies in prevention initiatives[25-27].

Biological risks are considered the keynote of epidemiological studies, in which the tendency is to identify conditions that place subjects at a greater or lesser risk of exposure. When considering STIs, sex becomes the most important route of contagion[28]. In this regard, it is important not to build approaches with any kind of moral judgment regarding sexual practice. On the contrary, deconstruction of the sense of responsibility that often falls on the person when addressing and listing risk factors is recommended, especially biological factors. It is understood that sexual intercourse, as well as food, fear, aggression, and family care are part of the organization of the basic activities of the animal species and, above all, of humans[29] and so it should be considered by health professionals and services. Furthermore, it is recommended that risk and vulnerability in its social and economic dimension should not be naturalized. Cancer is a complex public health problem, faced at the national level due to its epidemiological, economic, and social magnitude. This last factor, therefore, seems to be transversal and a trigger for the other factors[15,16,19].

Thus, to understand the development of anal cancer and plan actions with sufficient scope for its control, it is essential that factors related to vulnerabilities of a socioeconomic and cultural nature are considered, which contribute to susceptibility to the risks in question and which are not fully under the control of the people. Given the above, without exhausting the topic, which is complex and has diversified approaches, the current work intended to understand the effects of vulnerability in the production of care.

In the context of Public Health, vulnerability is understood as the set of individual, collective, and contextual aspects that contribute to the development of infections and illness[30] and that are of great relevance to plan resolute approaches to care. The vulnerability approach enables the organization of broader initiatives than the risk-centered approach, favoring the organization of care processes that are more compatible with the idea of integrality[31], including screening for early diagnosis of anal cancer precursor lesions.

Furtado and collaborators[27] help us to understand the social production of the fragility of the subjects. By recognizing vulnerability as a condition marked by the diversity of life situations, the authors list some of its conditioning principles, especially in developing countries, including difficulty in accessing health services; fluctuations in the performance of the economy; deficiency in public policies, due to political instability; problems related to the organization of health services, which make it difficult for professionals to remain, affecting the quality of the programs; and STIs. These issues need to be considered when planning strategies for the health care of people

and groups, whether in the prevention, diagnosis, or treatment of diseases[31]. The treatment of people with STIs is guaranteed by the SUS and, in order to strengthen the quality of life of service users, it is based on two important basic principles, namely, interruption of the transmission chain and prevention of new occurrences[28].

The way in which the identification of risk conditions is organized, however, should not be a justification for building disciplinary and moralizing practices that reinforce social stigma based on prejudice and its incarnations of contempt, isolation, and distancing from health care policies. Nor should it become a reference to expose the human drama based on issues related to STIs. Care policies founded on the idea of integrality need to provide care actions for sick people and social groups and also to break the social stigma associated with diseases[32].

In this way, knowing and understanding the conditions of vulnerability to which people are subject and which puts them at risk for STIs can minimize the morbidity caused by social stigma, attributing the problem to the diseases and not to the subjects[33]. Therefore, among other issues related to care, the bond with the user to understand their conditions of risk and vulnerability for anal cancer, as well as other diseases and conditions, is an important step for tracking actions, as well as for health education initiatives.

Thus, the nature of the strategies must consider the profile of the people and socioeconomic variables of the community, the municipality, and/or the country, recognizing that the social aspect must be present when considering risks. With vulnerability constituting the perspective, strategies need to emphasize adherence to the system, improving the interaction between the population and the service[31]. This is also a relevant issue for composing professional training and continuing education in health services[32]. Expanding the training of health workers, whether professionals with undergraduate training or other occupations focused on the lines of care for people and communities, is essential, including with regard to understanding the conditions in which people build their lives and health, in addition to the pathophysiological aspects related to diseases, which also expands the effectiveness of care actions.

Care for people and communities in relation to anal cancer: subsidies for a public care policy

Currently, the treatment of precursor lesions and anal cancer itself in Brazil is not systematic and sufficiently comprehensive and depends on the diagnosis initially conceived by the cytopathological examination. There are no structured protocols at the different points of care in the public health service to monitor the population as with other pathologies. However, the mobilization of actions to promote and protect, early diagnosis, and adequate treatment already have scientifically validated bases for the involvement of the different points of the care network, including primary care. The current approach is fragmented and is based on the cervical cancer screening model, as well as being focused on risk factors recognized by professionals and services. This is a good strategy, but it is insufficient given the specificities of the disease and the anatomy of the anal canal itself[10,14].

Health care in SUS services is based on the integration of health promotion and prevention actions and assistance to sick people, in the collective and individual dimensions, which is the first operational definition of comprehensive care, as registered in the legislation. Thus, also in the case of anal cancer, promotion and protection measures must be implemented for individuals, who must be monitored according to their needs with specific actions from diagnosis, passing through specialized procedures until reaching therapeutic care with greater technological density[24]. Expanding the scope of timely actions was addressed in the first analysis axis.

These steps define the time and frequency with which the cytological examination should be performed, as well as the subsequent steps and clinical procedures to be established in view of the cytohistopathological results[24]. In other words, in addition to promoting actions and health education in a more structural way, the notion of risk group must be expanded to conditions of social vulnerability in screening strategies for precursor lesions, as well as the appropriate cultural approach, as previously reported.

Here, the analogy to women's health care for prevention and assistance in the case of cervical cancer is also opportune. Women have access to the gynecological preventive examination in health services from the SUS primary care, available throughout the national territory[34]. However, the anal cancer screening test is almost unknown by the population, despite relevant indicators that point to the growth of the neoplasm in recent decades, especially among individuals who constitute the groups with greater social vulnerability and risk[11,12]. Anal cancer still does not seem to be part of the care planning in the daily life of SUS services as a care problem, with repercussions on the lives of people and communities and with real possibilities of primary and secondary prevention, without a great operational impact on the routines of the services.

Periodic and systematic anal screening, supported by the cytology technique, is still a long way off, but it constitutes a challenge to be faced. Considering the histological similarities between the anal canal and the cervix, the squamo-columnar junction, the risk factor, and the carcinogenesis process that presents the same course of evolution as precursor lesions, anal cytology could also be used as an effective tool for disease control[6,14].

It is a fact that there is no Brazilian database to control and map the population that uses the anal cytology test. Consequently, there is no longitudinal health record of individuals who receive primary care over the years, with information lacking on the population profile, the time interval between examinations, and the frequency with which they are carried out, a problem that is also found in other oncological conditions[11,24,35].

The qualification of records and computerization of data could guide and monitor the group of individuals assisted and the actions in the health service, such as identifying and recruiting the group to be screened and controlling the population profile and the frequency of examinations. However, it seems necessary that it be incorporated into care routines so that the quality of the record is expanded[11,35]. This is also an initiative indicated for the qualification of care routines and updating of entry forms for information systems routinely used in care services.

The prevention of anal cancer in Brazil is incipient. Scholars in the field, however, recommend the application of cytological examination for the initial approach of individuals identified as possible carriers of precursor or invasive lesions caused by HPV, in analogy to programs for the control of cervical cancer[4,17].

Before it reaches the stage of invasion of adjacent tissues and organs, anal cancer is preceded by a precursor phase that, when detected early, can reduce the chances of progression to cancer[6], the performance of the cytotechnologist is opportune, which plays an important role in supporting the diagnosis of morphological alterations, improving the quality of prevention programs, as well as strengthening the bases of screening and the opportunity for care for the population[3,10].

It is known that cytology is an effective tool for detecting and, therefore, decreasing the advance of precursor lesions, given the positive results obtained with the continuous assistance of the female population through cervical cancer prevention programs[3,24].

However, cytology, despite being a successful technique in terms of reducing mortality from cancer, especially of the cervix, as there are more studies since its application in screening programs, does not constitute a definitive diagnostic test, for reasons such as technical problems in material collection, preparation and fixation of the smear, and subjectivity and inadequacy in cytomorphological interpretation, which may even generate false-negative or false-positive results[36].

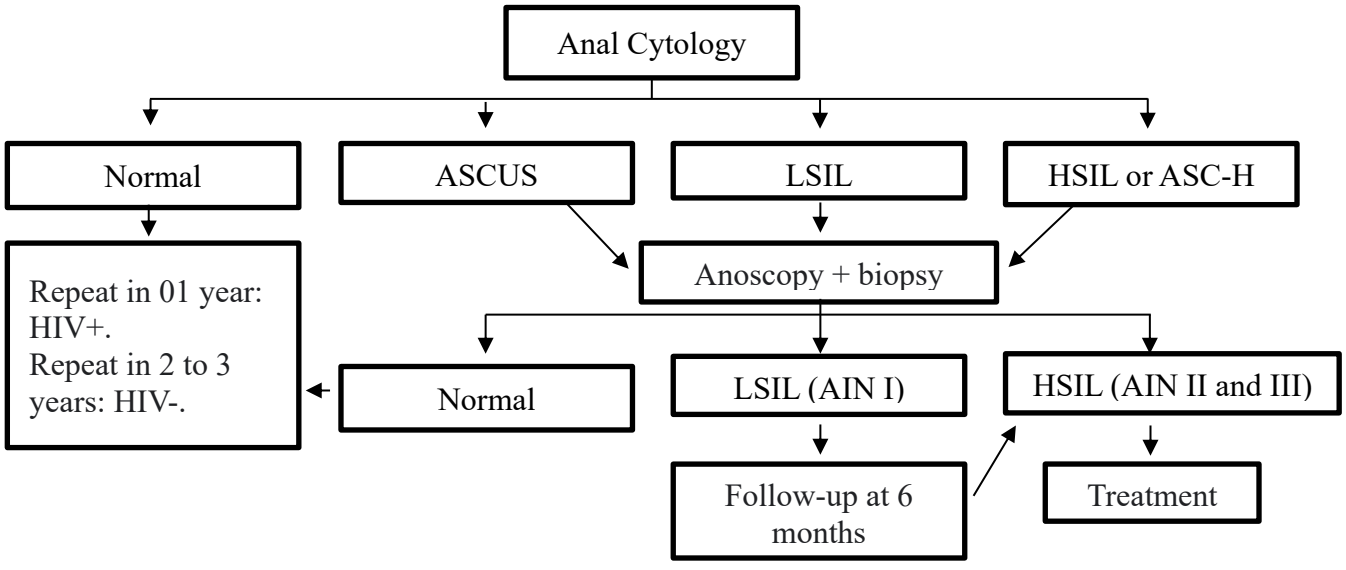
In view of this perspective, Coutinho[4] presented a protocol for monitoring and treating alterations based on the cytological test. This model, which allows coverage of individuals who attend or need access to health services, is based on the identification of cellular alterations associated with viral replication and includes clinical examination, oncological cytology, anoscopy, and biopsy (histology).

The scheme presented, also used by Chaves et al.[17] and Giaccio[14], serves as a basis to cover the target population, in addition to establishing the frequency and direction of practices/treatment (**Figure 1**), and can be incorporated into the routine of Basic Health Units (UBS), especially in the actions of promotion and identification of vulnerability conditions, and in specialized services.

The flowchart illustrated in Figure 1 is constructed from combined care flows that aim to ensure the care of individuals at different levels of health care. The first stage involves the cytological diagnostic service, and, from there, the subsequent stages are supported by techniques that complement each other, such as anoscopy and histology (biopsy), used with the aim of confirming the diagnosis and detecting the extent of the lesions or tumor, guiding the health professional in choosing the best practice[4,34].

Clinical inspection of the perianal region and anoscopy can improve the success of material collection to ensure cellular suitability[12,34]. The anoscope can improve visualization of the anal canal and thus guide biopsy collection for histopathological evaluation. If it is altered, the collection should take place in areas with identification of "fine vessels" or "coarse vessels" or even mosaic, as these aspects are indicative of low- or high-grade lesions. If not altered, biopsy should occur in random areas[37].

Screening, according to the literature, should be performed with anal cytology every year in HIV+ individuals and every 2–3 years in HIV−[4]. There is a tendency to extend the interval between collections when HIV− individuals achieve normal results, as proposed by the current recommendations according to the Brazilian Guidelines for the Screening of Cervical Cancer, established by the José Alencar Gomes da Silva National Cancer Institute (INCA)[24]. Screening indication factors should include other factors of social vulnerability, such as difficulty in accessing services, number of sexual partners, possibility of contact with HPV, and other conditions specific to each territory.



Source: Coutinho[4].
ASCUS: Atypical squamous cells of undetermined significance (Células Escamosas Atípicas de Significado Indeterminado); ASC-H: Atypical squamous cells cannot exclude high-grade squamous intraepithelial lesions (células escamosas atípicas não pode excluir lesão intraepitelial de alto grau); LSIL: Low-grade anal intraepithelial lesion; LIABG: Lesão intraepitelial anal de baixo grau; HSIL: High-grade anal intraepithelial lesion; LIAAG: Lesão intraepitelial anal de alto grau; AIN I, II, III: Anal intraepithelial neoplasm – grades I, II, and III; NIA I, II, III: Neoplasia intraepitelial anal – graus I, II, e III; HIV: human immunodeficiency virus (vírus da imunodeficiência humana).

Figure 1. Protocol for screening anal intraepithelial lesions. Modified from Park.

When anal cytology identifies atypical squamous cells of undetermined significance (ASCUS), low-grade anal intraepithelial lesion (LSIL), high-grade anal intraepithelial lesion (HSIL), or atypical squamous cells cannot exclude high-grade squamous intraepithelial lesions (ASC-H), patients should be referred for investigation using high-resolution anoscopy, followed by biopsy to reduce the incidence of anal cancer in high-risk populations[4,12].

Some studies show the existence of more serious injuries among individuals submitted to diagnosis confirmation. Thus, suggesting examination for early investigation is a good control strategy.

From this perspective, histopathological examination, performed in a biopsy during anoscopy, is used to confirm the degree of malignancy of the lesion[38,39], being able to determine its extent and assess whether there are margins compromised by alterations caused by HPV, followed by more appropriate treatment approaches[24,40].

In case of ASCUS diagnosis, repeat testing is recommended. When the result of the new examination is equal to or more significant than the previous one, the investigation should be guided by the new result. If subsequent tests are negative, the individual should return to routine cytological screening, with close monitoring of evidence of regression or not of cellular alterations[4,11,12].

In the case of individuals with an initial cytopathological diagnosis of LSIL, the approach varies between repeat cytology at 6-month intervals and referral for treatment, if the subsequent result identifies a more serious lesion[4]. For some authors, LSIL is not considered a precursor lesion, as it has no potential for progression to HSIL and, in most cases, can regress within a period of 12–24 months. This probability serves to guide a more conservative approach; however, the low-grade lesion should be accepted as an important risk and warning marker[24]. In subsequent cytology, the observer should always assess whether there has been regression of the cytopathological alterations of HPV infection[24], because the virus can stay in the body for years without the manifestation of signs and symptoms, while, on the other hand, certain subtypes can persist for a longer period, allowing the development of cell alterations that can progress to virus-related diseases[34]. These data justify maintenance of the periodicity in the diagnostic investigation.

The practice in the case of LSIL is also based on histopathological confirmation because it is believed that there is also the possibility of the presence of more serious lesions, caused by high-risk HPV subtypes[24], since an individual can be infected with more than one subtype of the virus at the same time[34]. The decrease in the resistance of the body's immune system can trigger the multiplication of HPV and, consequently, cause the appearance of clinical and/or subclinical lesions[34].

When there is a divergence from the previous examination, moving to HSIL, the individual should be immediately referred for an anuscopic evaluation and biopsy to confirm the degree of the lesion. If the subsequent results maintain the high-grade diagnosis, the investigation should follow the corresponding flow proposed in the literature[4,17].

In the case of initial diagnosis or confirmation of HSIL and/or cancer, interventions vary in scope. Thus, individuals can undergo treatment that varies between nonsurgical and surgical, with different results in terms of mortality and quality of life[4,17]. Nonsurgical treatment includes topical medication (e.g., trichloroacetic acid), phototherapy, local resection, laser, and systemic antiretrovirals. These procedures are still not well defined, with a high rate of recurrence, especially in HIV + patients[4,17]. Surgical treatment involves surgical resection of lesions, with the risk of loss of sphincter control and involuntary loss of stool. Anoscopy with local excision of early lesions presents less morbidity[4,17].

HSIL is more serious, as it has a greater proportion in the thickness of the epithelium, being considered as the real precursor of invasive cancer because it has a greater probability of progression[24]. Treatment for high-grade injury is nonspecific, and the choice always depends on the clinical presentation, host factors, patient preference, and medical experience[14].

In the case of cervical cancer control, an expanded measure implemented is the "see-and-treat," which consists of carrying out the diagnosis and treatment in a single visit, reducing the waiting time between diagnostic confirmation and treatment, especially when a more serious injury is suspected. This measurement can be performed in outpatient clinics or in Secondary Reference Units, for more complex procedures[24]. This strategy is effective, as it allows the exclusion of microinvasion and invasion suspected by cytology, thus controlling the histopathological evolution of the disease, since it is proven that high-grade lesions can progress to invasive carcinoma[34].

If the biopsy result is different from a high-grade lesion, the practice according to the new report should be followed or, if cancer is revealed, the individual should be referred to a tertiary unit for a specific procedure. In the case of anal cancer, the procedures in health services are not well understood, but the consensus, almost general among those who study the subject, is that any abnormal cytology results should be referred for high-resolution anoscopy with biopsy of the atypical areas[4]. The use of the anoscope increases the possibility of identifying altered areas and, therefore, the precision in the collection[37].

It should be noted that disagreement between the cytological examination and the anuscopic visualization, when present, respectively, with a positive result for high-grade lesion and normal visualization of the anal canal, should not make it impossible to collect a biopsy for histopathological evaluation[37]. A study carried out by Nahas[37] diagnosed a low-grade lesion in 10% of the study group patients undergoing random TZ biopsies, even when there were no suspicious areas of lesions. Management is important to reduce the number of cases with a false-negative diagnosis.

In the case of anal cancer, much remains to be done in terms of knowledge and incorporation of procedures in care services, since the probability of progression of precursor lesions to cancer is greater than the chances of regression and the problem has health and social relevance[24]. It is a fact that the broad standardization of procedures in the services could start with the screening of social cofactors that act as a trigger for the spread of STIs, especially HPV, which, because it is widely disseminated, represents a strong public health problem, especially in countries under development[24,41].

The systematization of care in the SUS would expand the population assisted and avoid the growth of the incidence and socioeconomic and personal costs of treating the disease only when installed in advanced conditions, as is currently the case. The interface between

specialized cytopathological knowledge, public health actions, and the approach to the problem from a collective health perspective allows advances in the scope of the right to health and comprehensive care, as determined by Brazilian legislation. This interface impacts not only the work within the services and points of care but also the training of agents who work in care, whether professionals or other occupations involved in care, including, as in the case highlighted in this essay, cytotechnologists, who have already been trained, with an expanded capacity for intervention in the cycle of oncological injury prevention.

CONCLUSION

The literature points out that ensuring access to quality services and actions is essential for the control of anal cancer. Relying on technical, human, and professional resources is important to guarantee health policies. However, isolated actions are not enough to achieve health promotion, since the profile of individual and collective behavior changes over time. Therefore, there must be an interface with Public Health, in the sense that this is a multidisciplinary and interdisciplinary area of knowledge that aims to promote health, based on the reorientation of care actions, incorporating issues of approaching people in different attention points in the territory and in the service network, starting in primary care.

The implementation of a standardized service for the screening of anal lesions, articulating the primary network with the services of secondary and tertiary levels for treatment, would be a response to the expansion of the universal right to health, with better living conditions, as guaranteed by the Brazilian Constitution, considering the expanded approach to social vulnerabilities, widening the offer of health promotion and prevention actions, including with regard to screening for precursor lesions, which is possible and necessary starting from primary care.

The strong point of the current study is the knowledge base used, which includes relevant scientific productions and evaluative studies on the subject under study. A limitation of the study is that it does not directly analyze the complexity of the services, which could enable understanding of other aspects of health care for people with anal cancer. There are certainly questions that were raised in this essay and that deserve new and deeper studies. However, identifying visible aspects that can be qualified in care actions is relevant and intends to broaden the debate. The aim of this essay was to contribute to another advance in the history of Brazilian health, which is the incorporation of health care for people subjected to risk and vulnerability conditions or with precursor or definitive lesions of anal cancer in the SUS health network, as a care policy. Here the objective was to foster ideas and produce visibility on the subject, not only for its biological and physiological aspects but also as a viable practice within the services.

Participation of each author

WPS: Conceptualization, Data curation, Formal Analysis, Writing – review & editing. NBESM: Data curation, Formal Analysis, Writing – review & editing. AAF: Conceptualization, Data curation, Formal Analysis, Writing – review & editing.

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Conflict of interest

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