Revista ARACÊ
ISSN: 2358-2472

APPLICABILITY OF THE "SEE AND TREAT" METHOD IN CYTOLOGICAL AND COLPOSCOPIC FINDINGS SUGGESTIVE OF HIGH-GRADE INTRAEPITHELIAL LESION (HSIL) IN A REFERRAL CENTER IN NORTHERN BRAZIL

https://doi.org/10.56238/arev7n3-175

Submitted on: 02/18/2025 **Publication date:** 03/18/2025

Gabrielly Lisboa da Silva Soares[1], Pedro Victor Oliveira Monteiro[2], Gabriela Borborema do Amaral[3] and Verena de Nazaré Batista Butzke Pacheco[4]

ABSTRACT

In Brazil, 16,340 new cases of cervical cancer were estimated – an increase of 4.8% compared to 2014 – remaining the third most common cancer among Brazilian women. Despite advances in screening policies, diagnosis is still made in advanced stages of the disease. In this sense, the application of the "see and treat" method can be fundamental for efficient treatment, with lower cost and less loss of patient follow-up. Thus, the present study aims to evaluate the agreement of cytological, colposcope, and histological findings, considering the applicability of the "See and Treat" method, to project the performance of the method in a reference center in the North of the country. This is a cross-sectional, retrospective, quantitative, descriptive study. The study data were collected from the electronic medical records of patients treated at the Lower Genital Tract Pathology Outpatient Clinic (FSCMPA) of the Santa Casa de Misericórdia Hospital in 2023. Data were collected regarding the pathology, type of management and treatment performed, such as the application of the "See and treat" method, histopathological examination results and final diagnosis, as well as possible changes in the course of the disease and/or treatment. Each case was classified as: histopathological positive for HSIL and histopathological negative for HSIL. In this study, among the patients with larger colposcopic findings, about 28% could have benefited from the application of the see-and-treat method. To reduce the waiting time for treatment (on average 3 months and 20 days). Despite this, this value is still unfavorable for seeing and treating.

Keywords: "See and Treat" method. High-grade intraepithelial lesion (HSIL). Colposcopy and cytology.

[1] Physician, Gynecologist and Obstetrician
E-mail: gabriellylis@gmail.com
[2] Physician, Gynecologist and Obstetrician
E-mail: Pv_monteiro@hotmail.com
[3] Doctor, Master in Gynecologist and Obstetrician
[4] Master's Degree from UEPA's Experimental Surgery
E-mail: butzkeverena@hotmail.com

Revista ARACÊ
ISSN: 2358-2472

INTRODUCTION

Cervical cancer originates from intraepithelial changes of the ectocervix or endocervix generated by infection by types of Human Papilloma Virus (HPV). HPV-generated lesions are considered the primary cause of cervical cancer and have different degrees of evolution from the cytological and histological point of view[1,2].

According to the World Health Organization, cervical cancer is the fourth most common cancer in women, with an incidence of 660,000 cases and 350,000 deaths worldwide in 2022. The highest incidence and death rates are concentrated in countries with low socioeconomic determinants, suggesting precarious access to HPV vaccine and, above all, to screening services2.

In Brazil, cervical cancer is the third most common type of cancer among women, excluding non-melanoma skin tumors. The National Cancer Institute (INCA) estimate for the 2023-2025 triennium was 17,010 new cases, representing a crude incidence rate of 15.38 cases per 100 thousand women1,11. When the regional analysis was performed, neoplasia emerged as the second most incident in the North (20.48/100 thousand) and Northeast (17.59/100 thousand) regions. INCA estimates indicate approximately 2,500 cases of cancer in the State of Pará3.

In the retrospective study of mortality rates in Brazil and its regions, the North Region stands out with the highest rates in the country, with a clear growth between 2000 and 2017 and a decrease from 2018 onwards. In 2021, the standardized mortality rate in the North region was 9.07 deaths per 100 thousand women, which represented the first cause of death from female cancer3.

Cervical cancer screening in Brazil follows the 2016 Guidelines for Cervical Cancer Screening. It occurs through the cytological test, indicated for all sexually active women over 25 years of age. The time between collections can vary from 1 to 3 years, depending on the patient's risk factors3.

In Brazil, despite advances in screening policies, diagnosis is still made in advanced stages of the disease. A study carried out in three national centers, with data from 2000 to 2009, including 37,638 cases of cervical cancer, concluded that 70.6% of the patients were diagnosed in advanced stages of the disease. Histological type squamous cell carcinoma, age over 50 years, black race or skin color, and low schooling were considered as predictors4,5.

Revista ARACÊ
ISSN: 2358-2472

In general, the investigation process proceeds with the performance of cytology, colposcopy and biopsy. In the case of high-grade intraepithelial lesions (HSIL) confirmed by biopsy, excision methods such as cold scalpel conization, high-frequency surgery (LEEP), laser conization, or electrosurgical needle conization are chosen[5].

The choice of method considers the patient's clinical particularities, as well as the operator's ability to use the method. Although the classic conization methods with a cold scalpel are still widely applied, this procedure is also more expensive due to the need to perform it in an operating room with general anesthesia or sedation[5,6].

In this sense, the excision of the transformation zone with High Frequency Surgery (LEEP) stands out for being a low-cost procedure that can be performed on an outpatient basis depending on the characteristics and location of the lesion1,3.

However, when considering the geographical, economic, and social conditions in Brazil, methods to speed up the diagnosis and treatment process are essential when dealing with progressive diseases. In high-grade intraepithelial lesions, the "See and Treat" method can be efficient in reducing the time between patient capture and treatment, ensuring lower losses to follow-up [2,5].

It is also important to note that in the northern region of the country, specifically in Pará, the level of education of the population is negatively projected in public health. A study carried out in the state indicates that significant numbers of patients were unaware of the preventive exam, with 26% never having the exam and 52% performing the preventive exam at intervals longer than the recommended periodicity of three years7.

The traditional approach with previous biopsy to direct the diagnosis requires more medical consultations before treating the lesion, increasing the patient's anxiety and the possibility of evasion, in addition to increasing the cost8.

The following study is justified by the fact that the "See and Treat" method can exclude biopsy when applied to women with previous cytology with HSIL, adequate colposcopy showing major abnormal findings, visible Squamo-Columnar Junction (SCJ), Type 1 or 2 Transformation Zone (TZ), lesion restricted to the cervix, and absence of suspected invasion or glandular disease. This approach has been used in the Department of Gynecology of the Fernandes Figueira Institute (Oswaldo Cruz Foundation) since 1998, following the guidelines of the National Program for the Treatment of Uterine Cancer[1].

These differences in the results are contained in the Guidelines for Cervical Cancer Screening (2016) consistent with the variables linked to cytology and colposcopy, since

Revista ARACÊ
ISSN: 2358-2472

they are examiner-dependent exams. Thus, sites with well-performing cytology and colposcopies with experienced professionals guarantee the acceptable percentage of negative histologies.

In this sense, given the great demands of patients, the geographical and social condition of the State of Pará, the present study aims to evaluate the agreement of cytological, colposcope and histological findings, considering the applicability of the "See and Treat" method, to project the performance of the method in a reference center in the North of the country.

The following study aimed to evaluate the agreement of high-grade cytological, colposcopic and histological findings, considering the applicability of the "See and Treat" method. In addition, to identify the cases in which the applicability of "See and Treat" would result in the appropriate treatment of patients, to evaluate the cases in which the applicability of "See and Treat" would result in unnecessary treatments or undertreatment. To describe the epidemiological profile of patients referred with High-Grade Intraepithelial Lesion[1]

METHODOLOGY

This study was submitted to and approved by the Ethics Committee for Research with Human Beings of the Santa Casa de Misericórdia do Pará Foundation (nº 7.200.713). Care was taken in the study respecting the Standards for Research Involving Human Beings of the National Health Council (Res. CNS 466/12) by the declaration of Helsinki and Operational Norm No. 0001/2013 of the CNS. To use the data collected in the medical records, the researchers signed a data use consent form (TCUD).

This is a cross-sectional, retrospective, quantitative, descriptive study, carried out at the Lower Genital Tract Pathology (IPTT) outpatient clinic of the Santa Casa de Misericórdia do Pará Foundation (FSCMPA), in Belém, which stands out for being a reference in Gynecology and Obstetrics in the state of Pará.

The sample was defined by convenience and patients who were referred to the ITTC outpatient clinic with cytology compatible with High-Grade Lesion, aged over 25 years, with previous cytology of High-Grade Intraepithelial Lesion, colposcopy with major abnormal findings, visible JEC, lesion restricted to the cervix and absence of suspicion of invasive disease participated in the study. As exclusion criteria, pregnant patients,

Revista ARACÊ
ISSN: 2358-2472

immunosuppressed patients and patients referred with cervical biopsy will not participate in the study.

The study data were collected from the electronic medical records of patients treated at the PTGI outpatient clinic of the FSCMPA in 2023. Data were collected regarding cytology, type of management and treatment performed, such as the application of the "See and treat" method, histopathological examination results and final diagnosis.

The collected data were tabulated in Microsoft Excel (Microsoft©, Albuquerque, United States of America). By Resolution No. 466/12 and Operational Norm No. 0001/2013 CNS, like all research with human beings, this study also involves some type of risk to the institution and the participating population. In it, the possible risks or discomforts arising from participation in the research are the breach of confidentiality of information related to the research participants if the research data is stolen. These, however, will be coded without the participant's name and identified only by the number of the medical records. The data will be archived under confidentiality on a non-online and non-shared platform. This research does not pose any psychological or physical risks. At the time of data disclosure, there will be no individualization of the patient.

In turn, by Resolution No. 466/12 and Operational Norm No. 0001/2013 CNS, the possible benefits resulting from participation in the research are the increase in knowledge about the subject, which can help in the faster treatment of high-grade lesions, reducing the morbidity and mortality of this condition.

If the study identifies that the "see and treat" method can be safely applied, the economic benefits for the health system can be considered, given the greater speed of the therapeutic procedure. In addition, patients are now guaranteed more agile treatments, without the need for several trips to the outpatient clinic to the therapeutic procedure, reducing the possibilities of evasion and loss to follow-up.

RESULTS

The sample consisted of 123 patients referred to the FSCMPA outpatient clinic with previous cytology with High-Grade Intraepithelial Lesion. Of these, 64 patients (52%) were not included in this study because they presented, at the first consultation, a previous result of the anatomopathological study, therefore, with a management already defined by biopsy. In addition, 2 patients were also excluded because they were HIV carriers (1.6%), 1 patient. After all, they were under 25 years of age (0.8%), 1 patient with ongoing pregnancy

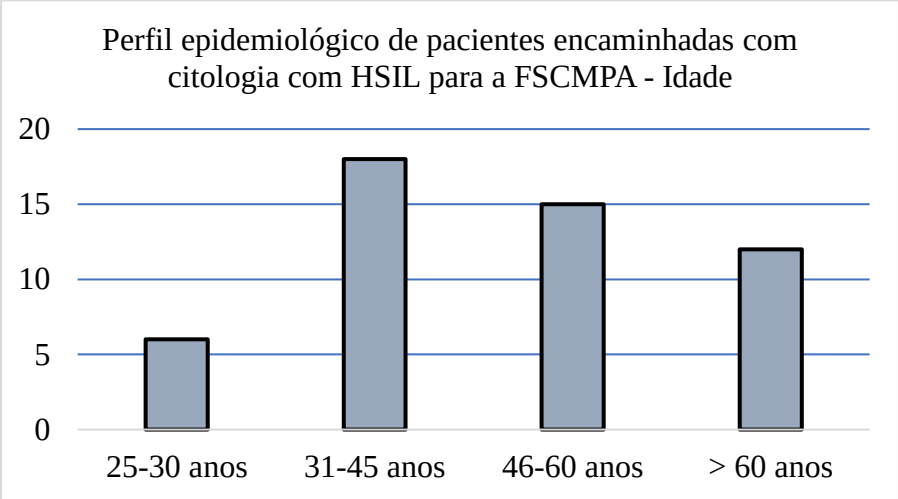
Revista ARACÊ
ISSN: 2358-2472

(0.4%) and 4 patients with invasive disease findings on colposcopy (3.27%). Thus, only 51 patients (41%) would initially be eligible for the possibility of fitting the method and were then included in the study.

EPIDEMIOLOGICAL PROFILE

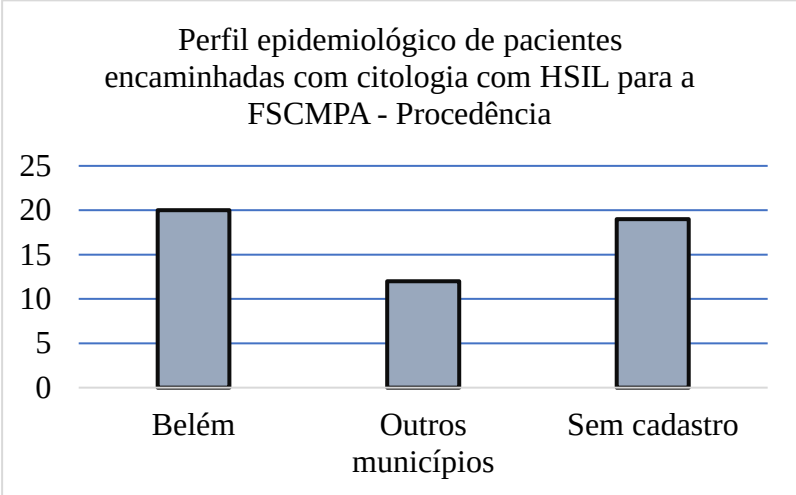
The mean age of the study participants was 47 years; 11.7% (n= 6) aged between 25-30 years; 35% (n=18) aged between 31-45 years; 29% (n=15) were in the 46-60 age group, and 23% (n=12) were over 60 years old (Graph 1).

Graph 1. Age - Epidemiological profile of patients referred with HSIL cytology to the FSCMPA.



Approximately 39% of the patients (n=20) came from the state capital, Belém; 23% (n=12) came from other municipalities and 37% (n=19) did not have a record of the municipality of origin (Graph 2).

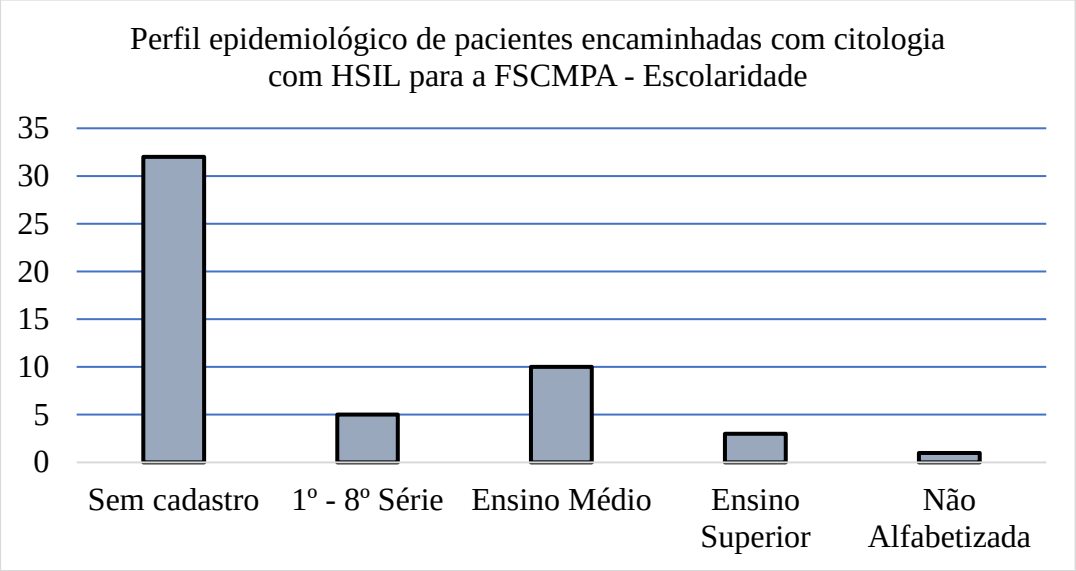
Graph 2. Origin - Epidemiological profile of patients referred with HSIL cytology to the FSCMPA.



Revista ARACÊ
ISSN: 2358-2472

About 62% (n=32) of the patients did not declare their education, 9.8% (n=5) studied only elementary school (1st to 8th grade); 19% (n=10) had attended high school; 5.9% (n=3) higher education; and 1.9% (n=1) declared themselves illiterate (Graph 3).

Graph 3. Education - Epidemiological profile of patients referred with HSIL cytology to the FSCMPA.



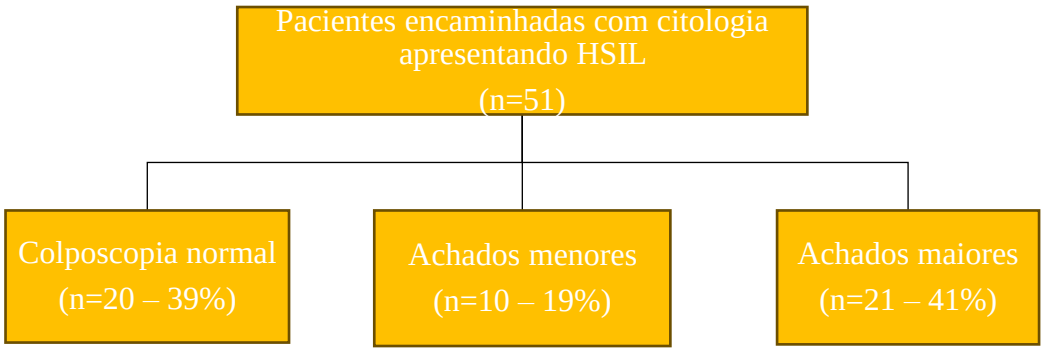
APPLICABILITY OF "SEE AND TREAT" WOULD RESULT IN INAPPROPRIATE TREATMENT

Of the 51 patients, 39% of the patients (n=20) had normal colposcopic findings on the examination, without the need for complementary biopsy. Among the remainder, 19% of the patients (n=10) had minor colposcopic findings, with Thin Aceto-White Epthelium being the most common finding. From the biopsies of the smaller colposcopic findings, 4 patients (40%) obtained HSIL anatomopathological study (CIN II/III), and were then subsequently submitted to LEEP.

On the other hand, of the total sample, 41% (n=21) presented higher findings in colposcopy, where the most common finding was Coarse Aceto-White Epithelium. In this group, 5 patients (23%) obtained Squamous Cell Carcinoma as a result of the anatomopathological examination, and were then referred to the referral oncology hospital. In addition, 2 patients (9.5%) presented in the anatomopathological study Low-Grade Intraepithelial Lesion, 7 patients (33%) presented Chronic Cervicitis and 1 patient (4%) resulted in Endocervical Polyp.

Revista ARACÊ
ISSN: 2358-2472

Figure 1. Colposcopic outcomes of patients referred with HSIL to FSCMPA in 2023.

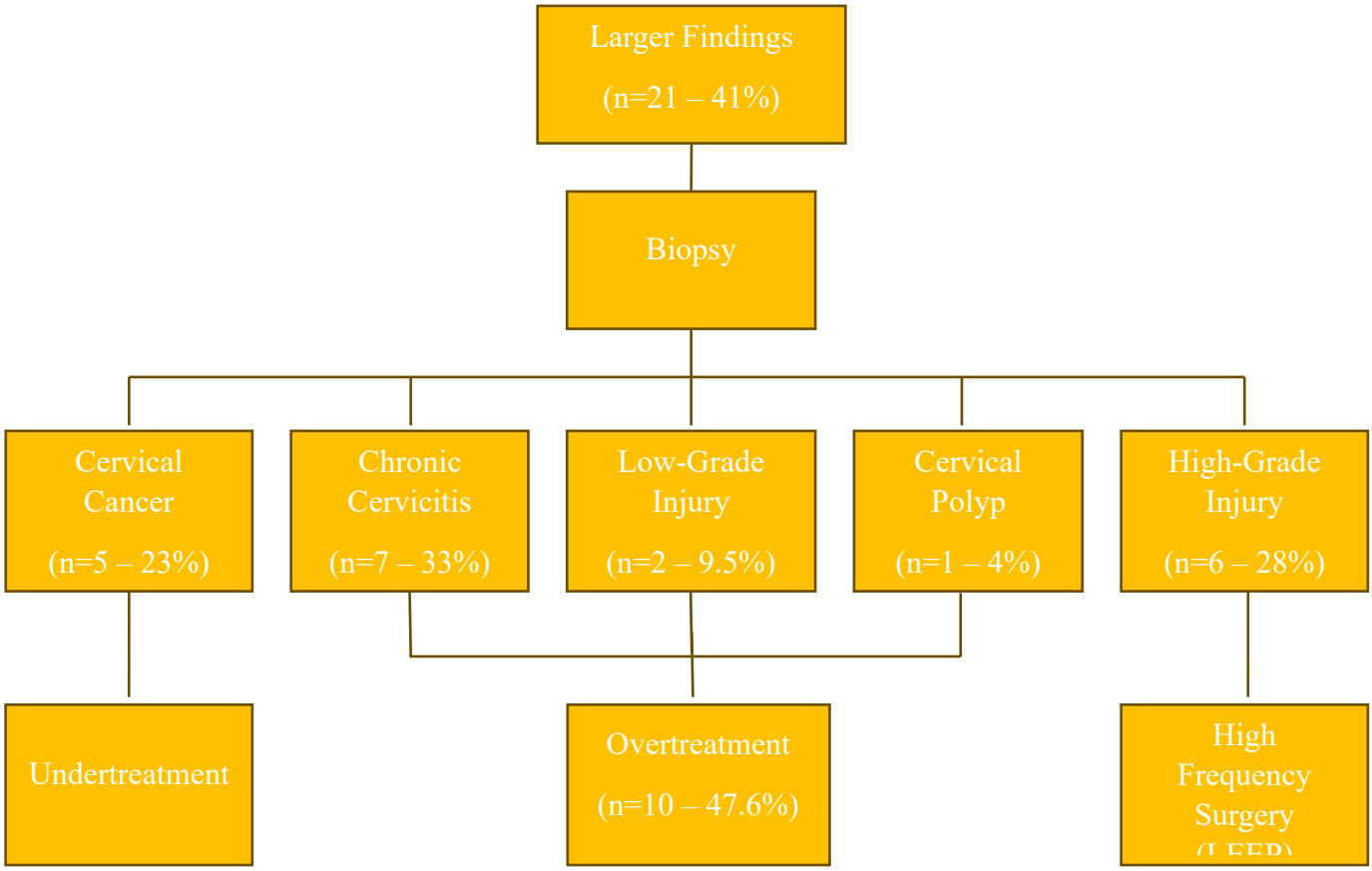


APPLICABILITY OF "SEE AND TREAT" WOULD RESULT IN PROPER TREATMENT

Among the patients who presented higher colposcopy findings (41%), six patients (28%) obtained HSIL in the anatomopathological study and subsequently underwent LEEP. The mean time between colposcopy and surgery was approximately 3 months and 20 days.

The scheme of representation of the agreement between colposcopic and anatomopathological findings can be seen in Figure 2.

Figure 2. Schematic drawing demonstrating the agreement between colposcopic findings and anatomopathological examinations.



Revista ARACÊ
ISSN: 2358-2472

DISCUSSION

The close relationship between socioeconomic predictors and the diagnosis and treatment of cervical cancer drives the need to know the epidemiological profile of the population, as it is fundamental for the active search and follow-up of patients. Despite this, we observed that the completion of basic patient information is not performed effectively. In this study, for example, it was observed that approximately 62% of the patients treated had unknown schooling and 37% were also of unknown origin.

Pontes (7) points out that women with a low level of education were more susceptible to the evolution of cervical cancer, since access to information included periodic examinations. Thus, the medical team's knowledge about the education and origin of these patients is essential to determine communication strategies about preventive practices.

In this study, it was observed that the application of the "see and treat" method would result in the overtreatment of 47.6% of patients with larger colposcopy findings, i.e., they could be mistakenly submitted to surgical treatment. Considering, then, a significant number of possible inappropriate treatments that were followed correctly due to biopsy.

Some studies report excessive treatment in the use of the "see and treat" method. A study conducted in South Africa, which evaluated a prevention program for patients with abnormal cytology, indicated an overtreatment rate of 9.7% among HIV-positive women and 15.5% among HIV-negative women. This risk of overtreatment — which involves both the possible sequelae of clinical complications and the unnecessary costs for health systems and patients — must be carefully weighed against the benefits of early detection and treatment of cervical disease14,15,16.

In developed countries, the selective use of "see and treat" is considered, practiced by the most experienced colposcopists who can differentiate the degree of lesions on examination. This tool is used when cytological and colposcopic findings unequivocally indicate high-grade cervical intraepithelial neoplasia[13]. However, the possibility of overtreatment or inadequate treatment is a reality of the method.

In this study, among the patients with larger colposcopic findings, about 28% could have benefited from the application of the see-and-treat method to reduce the waiting time for treatment (on average 3 months and 20 days). Regarding the duration of treatment, it is observed that this study is compatible with the INCA statistics of 2019-2022, where more

Revista ARACÊ
ISSN: 2358-2472

than 48% of diagnosed cases of cervical cancer have an interval of more than 60 days until the first cancer treatment[17].

Despite this, this value is still unfavorable for seeing and treating. Since, using the same applicability criteria, Sadan (9) obtained negative histopathological diagnoses in 8% of the cases and CIN I in 20% of the cases; Unlike this study, we obtained 47.6% of possible overtreatments.

In developed countries, the selective use of "see and treat" is considered, practiced by the most experienced colposcopists who can differentiate the degree of lesions on examination. This tool is used when cytological and colposcopic findings unequivocally indicate high-grade cervical intraepithelial neoplasia[13]. However, the possibility of overtreatment or inadequate treatment is a reality of the method.

In a previous study, Guducu (17) observed that the best applicability for the "see and treat" method is in patients with ASC-H and HSIL cytology. This will avoid delays in treatment, non-adherence of patients or lesions ignored in the biopsy. In addition, there are 23% of patients who would receive an "undertreatment" due to the result of a CA of the cervix in the biopsy. Despite this, this group would not be harmed by the see and treat method, since LEEP or Conization help in the staging of this type of cancer.

CONCLUSION

Based on the information discussed in this study, it is demonstrated that despite the good applicability of the "see and treat" method in patients with high-grade lesions in cytology and larger colposcopic findings, the percentages of overtreatment would still be significant in the evaluated scenario. It is known that the speed provided by the method can reduce dropout levels, increase access to treatment, and improve the prognosis of women with cervical injuries.

Nevertheless, the data still suggest the need for greater assertiveness in this service. In short, because it is a teaching hospital and, above all, it covers a socially fragile population, the strategy offered by the method should be considered.

Likewise, it is essential to expand the sample space of this study to understand more comprehensively the dynamics of the service, the social profile of the patients and the success of the method, favoring the best result for the selected public.

Revista ARACÊ
ISSN: 2358-2472

REFERENCES

1. BRAZIL, Ministry of Health. José Alencar Gomes da Silva National Cancer Institute (INCA). 2023 estimate: cancer incidence in Brazil. Rio de Janeiro: INCA, 2022. Available at: https://www.gov.br/inca/ptbr/assuntos/cancer/numeros/estimativa Accessed on: 10 November 2024.

2. WORLD HEALTH ORGANIZATION. Wave of new commitments marks historic step towards the elimination of cervical cancer 2024. Available from: https://www.who.int/news/item/05-03-2024-wave- of-new-commitments-marks-historic-step-towards-the-elimination- of-cervical-cancer. Accessed on: December 10, 2024.

3. BRAZIL, Ministry of Health. José Alencar Gomes da Silva National Cancer Institute (INCA). Brazilian Guidelines for Cervical Cancer Screening. Coordination of Prevention and Surveillance. 2nd ed. Rio de Janeiro: INCA; 2022.

4. THULER, L.C.S, et al. Determinants of the diagnosis of advanced cervical cancer in Brazil. **Rev Bras Ginecol Obstet**. v. 36, n. 6, p. 237-4, 2014.

5. ACOG Pratice Bulletin No. 99: Management of abnormal cervical cytology and histology. **American College of Obstetricians and Gymecologists. Obstet Gynecol**; v. 112, n. 6, p. 1419-44, 2008.

6. WRIGHT, TC JR, et al. Consensus guidelines for the management of women with cervical intraepithelial neoplasia or adenocarcinoma in situ. **Am J Obstet Gynecol**, v. 97, n. 4, p. 340-5, 2007.

7. PONTES, Valeria B. Study of HPV genotypes and factors associated with the diagnosis of cervical cancer in early stages in women treated at the oncological reference health unit of the State of Pará. Doctoral Thesis, Rio de Janeiro, 2016.

8. DENNY, L.A. et al. Does colposcopically directed punch biopsy reduce the incidence of negative LLETZ? **Br J Obstet Gynecol**. v. 102, p. 545-48, 1995; SADAN, O., et al. Treatment of high-grade squamous intraepithelial lesions: A "see and treat" versus a three-step approach. **European Journal of Obstetrics & Gynecology and Reproductive Biology,** v. 131, n. 1, p. 73–75, 2007.

9. MONTEIRO, D. L. et al. Prognosis of intraepithelial cervical lesion during adolescence in up to two Years of follow-up. **Journal of Pediatric and Adolescent Gynecology**, v. 23, n. 4, p. 230-236, 2010.

10. FERLAY, J. et al. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. **Int J Cancer**, v. 136, n. 5, E359-86, 2015.

11. SCHNEIDER, N. The treatment of high-grade squamous lesions based on cytological and colposcopic alterations: the see and treat method. Federal University of Paraná. 2017.

Revista ARACÊ
ISSN: 2358-2472

12. CHO, H & KIM, J.H. Treatment of the patients with abnormal cervical cytology: a "see-and-treat" versus three-step strategy. **J Gynecol Oncol**, v. 20, p. 164-8, 2009; QUINN, T.C et al. Viral load and heterosexual transmission of human immunodeficiency virus type 1. **Rakai Project Study Group. N Engl J Med**. V. 342, p. 921–9, 2000.

13. EBISCH, R.M.F et al. Evidence supporting see-and-treat management of cervical intraepithelial neoplasia: a systematic review and meta-analysis. **BJOG**, v. 123, p. 59–66, 2016; LI, Z.et al. Three-step versus "see and treat" approach in women with high-grade squamous intraepithelial lesions in a low-resource country. **Int J Gynecol Obst** v. 106, p.202–5, 2009; GUDUCU, N. et al. Three-step approach versus see-and-treat approach in patients with cytological abnormalities. **Int J Clin Exp Med**, v. 6, n. 5, p. 372-62013, 2022.