EVALUATION OF CYTOLOGICAL QUALITY INDEXES IN A CLINICAL LABORATORY

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Introduction: Cervical cancer (CC) has as its main causal factor the infection by Human Papillomavirus (HPV). The course of HPV infection is usually very variable with benign evolution in most cases, in some cases it can progress to neoplasms. The world estimate reveals that cervical cancer was the fourth most frequent in the world, with 570 thousand new cases, representing 3.2% of all cancers. The Papanicolaou test is an exam that is performed to check for possible changes in cervix cells. As it is a manual procedure from collection to examination, it is subject to error, interfering with the diagnosis. Professionals responsible for the collection and laboratory analysis must understand the steps of the exam and perform it correctly, ensuring the safety and effectiveness of the final diagnosis. Aiming at the quality of the reports, and proficiency in cytopathology, it is necessary to apply internal quality control (IQC) methods, thus being able to reduce the high rates of false-negative results and reduce expenses due to collection errors. The objective of this work was to evaluate the IQC of the cytopathological exams, in the years 2018 and 2019 of the Clinical Analysis Laboratory of the Evangelical University, according to the quality indicators for the cytopathological

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exams. **Methodology:** The project was approved by the Human Research Ethics Committee of the Evangelical University of Goiás N°3.366.008/2019. This is a descriptive, quantitative-qualitative, retrospective, longitudinal study, consisting of the analysis of cytological reports of the preventive examination for the control of cervical cancer. The quality control criteria analyzed were; positivity index (PI), percentage of unsatisfactory samples, percentage of tests compatible with ASC, percentage of tests compatible with HSIL; ASC X SIL ratio. **Results:** According to the database, 333 cytopathological exams were performed in 2018 and 2019, 181 (54.35%) in 2018 and 152 (45.64%) in 2019. Of the total number of exams, 327 (98,19%) were considered satisfactory for oncotic evaluation. In the year 2018, 177 (97.79%) were considered satisfactory and 150 (98.68%) in the year 2019, this data indicates a percentage of unsatisfactory exams total 1.80% annually, and 2.20% in 2018 and 1.31% in 2019. For the evaluation of the PI, the ratio of samples considered negative for lesion or malignancy and the samples that presented any alteration suggestive of intraepithelial lesion or cancer was calculated, a total PI of 5.19% was obtained, stratifying for 5.08% in 2018 and 5.33% in 2019. For the assessment of the percentage of tests compatible with ASC, which includes atypical squamous cells of undetermined significance, possibly non-neoplastic (ASC-US) and atypical squamous cells of undetermined significance when high-grade intraepithelial lesions (ASC-H) cannot be ruled out, a total of 2.44% was found, and 1.69% in 2018 and 3.33% in 2019. The evaluation of the percentage of exams HSIL-compliant measures the ability to detect precursor lesions (high-grade lesions) that represent the main objective of cervical cancer screening, through the calculations a total of 1.22% was found, in the year 2018, 1.12%; and in the year 2019, 1.33%. In the evaluation of the ASC X SIL ratio index, a total of 0.88 was obtained, in the year 2018, 0.5; and in the year 2019 1.66. **Conclusion:** The results demonstrate that all quality indicators are in accordance with the established parameters. In view of the results found, it is possible to note the importance of the IQC, which produces reliable results and minimizes errors in the diagnosis of patients. However, it is detrimental to maintain regular surveillance of cervical sample collection quality, processing and analysis.

Keywords: Uterine Cervical Neoplasms; Quality Control; Papanicolaou Test; Human Papillomavirus

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