ANALYSIS OF THE RESULTS OF CYTOPATHOLOGICAL TESTS OF UTERINE CERVIX

ANÁLISE DOS RESULTADOS DE EXAMES CITOPATOLÓGICOS DO COLO UTERINO
ANÁLISIS DE LOS RESULTADOS DE EXAMENES CITOPATOLOGICOS DEL CUELLO UTERINO

Marina do Nascimento Moraes¹, Camila Gondim da Fonseca Jerônimo²

ABSTRACT

Objective: describing the results of cytopathology of the uterine cervix in women aged 25-64 in the Municipality of João Pessoa, from 2009 to 2013. Method: a retrospective study based on the results of 118,795 examinations in Family Health Units of the Municipality of João Pessoa, State of Paraíba. Data were obtained through research in the System Database Information about cervical cancer - SISCOLO. Results: 44,327 examinations were performed in 2009, 43,909 in 2010, 33,008 in 2011, 41,272 in 2012 and 26,279 in 2013. The samples were analyzed for coverage of prevention of cervical cancer in women 25 to 64 years old, adequacy of samples, microbiology changes, and benign cervical changes, atypical in squamous and glandular cells. Conclusion: from data found in this study highlights the lower results of intraepithelial lesion high-grade squamous, which fell from 110 in 2009 to 49 in 2013. This decrease suggests an improvement in the early detection of precursor changes, effectuating the main purpose of the examination. Descriptors: Women's Health; Cervix of Uterus; Thesis Papanicolaou.

RESUMO


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INTRODUCTION

In Brazil, the high number of incidence and mortality from cervical cancer justify the implementation of prevention and cancer control (promotion, prevention, diagnosis, treatment, rehabilitation and palliative care), based on the guidelines of the National Policy.1

Cervical cancer is a slow and silent growth disease initially presents a pre-clinical stage, asymptomatic, and important progressive intraepithelial changes. These changes progress slowly for years, until the attacker stage of the disease, often was not possible to cure.2

The estimate of the National Cancer Institute for the year 2014 and 2015 shows the occurrence of approximately 576,000 new cases of cancer in Brazil, including non-melanoma skin cases, reinforcing the magnitude of the cancer problem in the country. Among women, excluding cases of non-melanoma skin, breast cancer, 57,000, will be the most prevalent, followed by cervical cancer, with an estimated 15,000 new cases.3

Also according to the INCA (2014), Paraiba is estimated for the current year the occurrence of 290 new cases of cervical cancer, of which 70 are expected in the city of João Pessoa, smaller numbers compared to the estimated 2012 which was 320 new cases for the State and 80 to João Pessoa.

The incidence of cervical cancer is manifested from the range of 30 years old, increasing their risk quickly up to the age peak between 50 and 60. In 2012 this cancer was responsible for the death of 265,000 women, of these 87% were in developing countries. Thus, for cancer of the cervix, the already mentioned INCA study showed an approximate survival of 70%.3

According to research the early detection of cervical cancer should be performed from the early screening of lesions and appropriate treatment to prevent the onset of disease. Among the detection techniques, the Pap smear of the cervix is considered as the most effective and efficient for screening. The World Health Organization (WHO) recommends the exam every three years for women 25 to 64 years old, after two negative tests with annual range.4

Regular Pap smear testing continuous being the most widely adopted strategy for screening of cervical cancer. However, although the cervical cytology examination was introduced in Brazil in the 1950s, the national coverage of this test still lies below the recommended WHO.5

The Ministry of Health sets the frequency the preventive examination of the cervix once a year and, after two consecutive negative annual examinations every three years in women 25-60 years of age, according to the recommendations the main international programs.2

The determination of the age group for carrying out the screening is justified by the low incidence of cervical cancer in women under 24, where most cases are diagnosed in stage I and tracking is less efficient to detect them.6

The squamous cell carcinoma is the most common histological type of cervical cancer, about 85% to 90% of cases, followed by adenocarcinoma. The main risk factor for the development of high-grade intraepithelial lesions and cervical cancer is infection with human papilloma virus. However the presence of the virus by itself, is not sufficient to cause the development of cancer, it is necessary persistence.3

Thus this article aims to describe the results of cytopathology of the uterine cervix in women 25-64 years in João Pessoa County from 2009 to 2013.

METHOD

Article prepared for completion Course presented to the Specialization Course in Basic Care Management and Health Micro-Regional Networks, of the Department of Health Promotion of the Federal University of Paraiba/UFPB. João Pessoa, PB, Brazil. 2014

This study analyzed the results of cervical screening cervical women aged 25-64 years old conducted in health centers of the city of João Pessoa Family, State of Paraíba.

The study was retrospective, based on the results of 118,795 examinations performed between January 2009 and November 2013. Data were obtained by searching the System Database Information on cervical cancer - SISCOLO.

The results were presented descriptively, on presentation and analyses of the results and discussion, cervical changes followed the Brazilian Nomenclature for Cervical Reports and have been described in subgroups: Coverage of prevention of cervical cancer in women 25 to 64 years old, adequacy of samples, microbiology changes, and benign cervical changes, atypical squamous and glandular cells.

The data were entered into a database, processed and analyzed using the statistical
program using the Statistical Package for Social Sciences SPSS, version 18. The statistical analysis was realized in a descriptive way with the use of relative frequency (%) and absolute (N).

**RESULTS**

Figure 1 shows the total amount of the procedures performed each year among women 25 to 64 years old.

Concerning the adequacy of the material found little variation during the study period, with predominant presence of satisfactory material.

**Table 1. Adequacy of the samples**

<table>
<thead>
<tr>
<th>Year</th>
<th>Satisfactory</th>
<th>%</th>
<th>Unsatisfactory</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>44.185</td>
<td>99.68</td>
<td>142</td>
<td>0.32</td>
</tr>
<tr>
<td>2010</td>
<td>43.817</td>
<td>99.80</td>
<td>92</td>
<td>0.20</td>
</tr>
<tr>
<td>2011</td>
<td>32.775</td>
<td>99.30</td>
<td>233</td>
<td>0.70</td>
</tr>
<tr>
<td>2012</td>
<td>41.217</td>
<td>99.87</td>
<td>55</td>
<td>0.13</td>
</tr>
<tr>
<td>2013</td>
<td>26.249</td>
<td>99.89</td>
<td>30</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Table 2 shows the results with microbiological findings, among them include changes related to sexually transmitted diseases such as Trichonomas vaginalis which showed a considerable decrease (83.3%) during the period. The values found for Chlamydia sp and Actinomyces were much prevalent.

**Table 2. Changes in Microbiology.**

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actinomyces</td>
<td>16</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Supra-Cythoplasmatic / Gardnerella Vaginalis</td>
<td>7.523</td>
<td>6.427</td>
<td>4.139</td>
<td>4.454</td>
<td>2.512</td>
</tr>
<tr>
<td>Trichonomas</td>
<td>2.101</td>
<td>1.662</td>
<td>863</td>
<td>785</td>
<td>351</td>
</tr>
</tbody>
</table>

There are considered benign cervical changes the changes of epithelial cells, and may appear as atrophy, inflammation, metaplasia, radiation and repair. Generally these changes are determined by the action of physical agents, which may be radioactive, mechanical or thermal, chemical, or caustic as abrasives drugs, chemotherapeutic and vaginal acidity on glandular epithelium.
The findings of intra-epithelial lesion of low grade are chance of 15% to 30% of biopsy compatible with CIN II and CIN III. Already in about 70% to 75% of reports of intraepithelial lesion severity present histopathological diagnosis confirmation and 1% to 2% will have a histopathologic diagnosis of carcinoma.6

Table 3. Benign cervical changes.

<table>
<thead>
<tr>
<th>Year</th>
<th>Atrophy</th>
<th>Inflammation</th>
<th>Metaplasia</th>
<th>Radiation</th>
<th>Reparation</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2.945</td>
<td>27.131</td>
<td>2.337</td>
<td>7</td>
<td>1.323</td>
<td>90</td>
</tr>
<tr>
<td>2010</td>
<td>2.747</td>
<td>25.448</td>
<td>2.330</td>
<td>13</td>
<td>935</td>
<td>107</td>
</tr>
<tr>
<td>2011</td>
<td>2.205</td>
<td>19.139</td>
<td>1.709</td>
<td>6</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>2012</td>
<td>3.070</td>
<td>26.855</td>
<td>3.801</td>
<td>11</td>
<td>482</td>
<td>52</td>
</tr>
<tr>
<td>2013</td>
<td>2.167</td>
<td>16.916</td>
<td>2.095</td>
<td>7</td>
<td>130</td>
<td>47</td>
</tr>
</tbody>
</table>

The coverage rate in 2009 (21.44%) was lower than that in the state of Pernambuco in a survey conducted in the same year, where the results point to a coverage of more than 60% among women 25-64 years old. These stands out a significant concentration of women without children, but reproductive aged that are discovered by the screening test and there is the presence of social inequality in the exam, although not too prominent by the limits of the sample.7

Following the trend study that evaluated the coverage of examinations in Amparo, State of Sao Paulo8, and the population coverage on the basis of examinations performed between varied and tended to decrease. Whereas the Ministry of Health standards recommend every three years, that is, the coverage that interests the government is the percentage of women who had at least one test in the last three years. Thus, despite the observed decrease in annual coverage, the three-year coverage was favored by the increase in the percentage of women who underwent controls at intervals of two to three years.

**DISCUSSION**

- **Coverage of prevention of cervical cancer in women aged 25 to 64**

  This study revealed that the assessed municipality, conducting cytological examination of the cervix in women 25-64 years old hit the proposed target by the Ministry of Health, which ranged over the period, with 44.327 made in 2009, 43.909 in 2010, 33.008 in 2011, 41.272 in 2012 and 26.279 in 2013.

  The coverage rate in 2009 (21.44%) was lower than that in the state of Pernambuco in a survey conducted in the same year, where the results point to a coverage of more than 60% among women 25-64 years old. These stands out a significant concentration of women without children, but reproductive aged that are discovered by the screening test and there is the presence of social inequality in the exam, although not too prominent by the limits of the sample.7

- **Adequacy of the samples**

  According to the Brazilian guidelines for the screening of cervical cancer are classified as satisfactory, samples presenting cells in a representative amount, well distributed, fixed and stained, allowing their observation and diagnostic conclusion. May be present in these samples representative cells of the epithelium of the cervix, as squamous cells, glandular and/or metaplastic.6

  The suitability of results during the period in the study, over 99% were similar to those found in the analysis of 395 tests carried out in Canoas, Rio Grande do Sul, where 100% of the collected material was considered satisfactory.7

- **Changes of Microbiology**

  The microbiological changes are found present in all the tests previously examined, that are expected the presence of micro-organisms that are part of the vaginal flora characterized infections and not require treatment. Among them we can mention the Lactobacillus sp, coccus and other bacilli.5

  The result found was markedly lower than that found in a survey conducted in Natal/Rio
Grande do Norte, between 2005 and 2010, where for the same age group prevailed Gardnerella vaginalis (47.2%), Candida sp. (73.0%) and Chlamydia sp. (60.2%), all agents associated with the development of cervical cancer, especially Chlamydia sp. and Trichomonas vaginalis.

● Benign cervical changes

According to the Brazilian guidelines for the screening of útero6 cervical cancer, benign changes are considered the presence of inflammation, repair, atrophy, metaplasia or radiation as a result of cervical examination.

This study found benign cervical lesions, which highlights the presence of inflammation as the most recurrent. In a study conducted in Bandeirantes, State of Paraná, 52.37% were found benign cellular changes, especially inflammation, metaplasia and atrophy.

● Atypical squamous cells and glandular

Cervical intraepithelial neoplasia (CIN) is a pre-invasive disease preceding cervical cancer and is characterized in degrees according to the thickness of the epithelium showing mature and differentiated cells in CIN I, II and III. The CIN I, the slightest degree, for the most part does not progress and is not considered precursor lesion. Already the most severe levels (II and III), is likely to progress to cervical cancer if not treated properly.6

It has been found to lower results suggestive of atypical squamous cells, especially of high-grade squamous intraepithelial lesion, which fell from 110 in 2009 to 49 in 2013. This decrease can suggest an improvement in the early detection of precursor changes, not allowing the evolution of more severe changes as CIN II and III.

In a study conducted in Belem, State of Para, analyzing the results of 363 cytological examinations of cervical intraepithelial cervical neoplasia was much prevalent, accounting for 0.82% of the cases.12

A survey conducted by the National Cancer Institute based on the results of all tests performed in 2009 showed that about 48% to 69% of women with suggestive cytological report of adenocarcinoma in situ had confirmation of injury to histopathology and, of these, 38% had invasive adenocarcinoma report. Therefore, the orientation of this Institute is that all patients with cytology adenocarcinoma in situ, found in the Basic Health Unit, should be directed to the Average Reference Unit Complexity for immediate colposcopy, as well as the carriers of suggestive cytological report invasive adenocarcinoma.5

A systematic review of articles that evaluated the relation between glandular cell atypia with the presence of benign, pre-neoplastic and neoplastic revealed that invasive lesions have a variation in invasive squamous cell carcinoma of the percentage of 0.8% to 4.44% and cervical adenocarcinoma from 1.4% to 18%. Of the studies reviewed only one report found no association with malignancy.15

Thus, the approach recommended for women with histopathological lesions suggestive and examination of adenocarcinoma in situ (about 48-69%), or invasive adenocarcinoma (38%), in tests performed in the Family Health Units, should have the clinical management referral for immediate colposcopy, as well as the carriers suggestive examination of invasive adenocarcinoma.5

**FINAL NOTES**

The Pap smear testing is an essential tool in the early detection of changes that may lead to the development of cervical cancer. It is a simple, fast, effective and low cost, which must every day be more stimulated both by management but also by professionals of the Family Health Teams.

Reflective study based on literature review shows that if carried out diagnostic tests and early treatment risks of injury progress to neoplasia are rare and the quality of life of users improves markedly.

From the data found in this study highlights the lower results of intraepithelial lesion high-grade squamous, which fell from 110 in 2009 to 49 in 2013. This decrease suggests an improvement in the early detection of precursor changes effectivating the main purpose of the examination.

The knowledge of the health status of a population is crucial to decision-making concerning not only for the treatment of pathologies, but primarily for the planning of actions for prevention of diseases and health promotion, always seeking the effectivity and efficaciousness of health services.

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DOI: 10.5205/reuol.7049-61452-1-ED.0903sup201502


Submission: 2014/04/13
Accepted: 2015/03/13
Publishing: 2015/04/15

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