

Twenty years of contributions to the study and prevention of uterine cancer

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Summary

During 20 years of preventive study of the oncogenic risk of cervix-uterine cancer in the Republic of Panama, applying the protocol of the Gynecology Institute of the University of Padua, Italy, we diagnosed 5,009 cases out of the 9,312 patients studied. We classified them according to the degree of the pathology, guiding the patients to the appropriate treatment and the respective follow-up, and concluding that those women who do not follow recommendations have five times more probability of suffering from cervix-uterine cancer. Moreover, the age groups between 20 and 40 years old with HPV infection that do not have access to these procedures are highly vulnerable.

Key words: Cervical uterine oncogenic risk; Diagnosis; Treatment evolution.

Introduction

In our country, uterine cancer is a problem that is still far from being resolved, although, since the fourth decade of the past century, the Pap has been applied in public as well as private institutions, and since the 1980s, colposcopy has been promoted and applied [1].

Adjusting the protocol of cervix-uterine pathology to our needs, not only have we achieved the initial diagnoses but also the evolutive prognosis, as a response to the applied treatments or to the spontaneous progression [2-4].

Strictly under a descriptive aspect, we classified the general oncogenic risks in five groups: pure oncogenic risk, pure HPV infection, pure herpes infection, dysplasia and cancer [5].

In the same way, we guided the cryosurgery treatment, cauterization, topical and oral treatments, and all surgical procedures like conization and hysterectomy. We followed-up the patients for a three-month period. The evolution of the patients permitted us evaluate the different treatments and thus, we can sustain with statistical proof the validity of these treatments [6, 7].

Many patients in this study were diagnosed in the medical tours. Thus, has been it difficult in some cases to carry on with post-treatment follow-up, leaving these patients with the initial diagnosis and without treatment as the only statistical fact.

Methods and Material

Within the 1982-2002 period, we performed 17,996 colposcopic studies, 17,178 cytological studies and 4,597 directed biopsies. We also covered some difficult to access towns in medical tours to 12 rural populations, the Women's Prison and local screening in the capital city, which were added to the diagnostic methodology.

We applied the combined methodologies in the medical tours: cytology, colposcopy and directed biopsy, while colposcopy and/or directed biopsy were performed in the cases that needed these procedures as a complement to pathological cytology. The following sequence was carried out in the colposcopic evaluation with the application of the reagents: acetic acid, lugol solution and sodium bisulphate.

The 5,009 patients chosen for this oncogenic risk study had more significant values in comparison with the international values, which in a certain way justifies the elevated number of cervical uterine cancer cases that, according to the statistical reports of the National Oncogenic Institute of Panama, in the year 2003 reach the rate of 79.0/100,000 women.

Results

Out of the 9,312 patients studied between the years 1982 and 2002, oncogenic risk (OR) cases amounted to 5,009 (53.8%).

Out of the 5,009 patients, 3,437 corresponded to pure HPV infection, which did not have any connection with dysplasia or cancer. There were 731 cases of pure OR, with a pathologic scene characterized by atypical colposcopic images and additional negative studies; 641 cases of dysplasia were associated with HPV infection; 189 cases of uterine cervix cancer were, pure or associated with HPV infection; and 11 cases (0.2%) of pure herpes infection were noted (Table 1).

As for patients with OR, 50.1% of the early diagnoses were due to health controls, without any previous referrals.

The integration of colposcopy, cytology and directed biopsy in the diagnostic methodology has produced a significant reduction of false-negative results, and therefore, a better categorization of cases and the respective therapeutic guidance [9].

Nevertheless, the colposcopic findings within the different pathology groups indicated that in the pure OR patients atypical metaplasia prevailed and in dysplasia and cancer, the atypical transformation zone (ATZ).

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Table 1. — *Oncogenic risk.*

	1982 - 1989	1990 - 1999	2000 - 2002	Total	%
Pure OR	240	361	130	731	14.6
Pure HPV	880	2,281	276	3,437	38.6
Dysplasia	230	321	90	641	12.8
Cancer	84	91	14	189	3.8
Pure Herpes	1	5	5	11	0.2
Total	1,439	3,059	515	5,009	100

Total patients: 9,312 - 5,009 cases of OR, 4,159 as pure HPV and those associated with dysplasia or cancer.

However, the analytic results of the colposcopic findings allowed us to identify the cases of false-negative results (25.3%), and among these the ATZ was the most common. In atypical colposcopic cases the ATZ prevailed with 34%, followed by HPV with 25% and leukoplakia with 22% [10].

Cytology itself achieved specific diagnoses of condyloma in 63% of the cases, dysplasia in 40% and cancer in 47%; cytology reached pathologic diagnoses in 55% of the OR cases and 45% of the false-negative results.

Within the obtained cytological results, 26.6% were false-negative results and 73.3% were pathologic; 54.6% corresponded to HPV, 16% to dysplasia and 3% to cancer.

Pathological analysis revealed that among condylomas the atypical type prevailed with 87%, among dysplasia cases associated to typical HPV it prevailed with 35%, and among cancers pure in situ carcinoma prevailed with 41.2%.

It should be mentioned that within the false-negative cases, inflammatory results prevailed with 75%. The total number of directed biopsies was 3,152 out of 5,009 patients with OR; 61.2% corresponded to condylomas, 88.1% to dysplastic cases, 85.1% to cancer and 43.6% to pure OR. It means that we achieved complete preventive diagnoses in 62.9% of the total OR patients in accordance with Marana [11].

Most of the patients were guided to more conservative treatments with cryosurgery as the elected method in 1,965 cases, followed by cauterization [12].

Based on the diagnostic pathology, among the pure ORs we performed 205 cryosurgeries, among condylomas 1,193 cryosurgeries, among dysplasias 257 cryosurgeries, and among cancers we performed ten cryosurgeries.

Based on the grade of pathology, the patients were referred to their respective physicians or medical center for the definitive treatment (Social Security Foundation, National Oncology Institute, Santo Tomás Hospital, etc.). At the present time, we are aware of applied treatment in 56.1% of the total oncogenic risk patients (Table 2).

Table 2. — *OR treatments.*

	Pure OR	Herpes	HPV	Dysplasia	Cancer	Total	%
Cryotherapy	205	0	1,193	257	10	1,665	58
Cauterizer	167	0	186	31	0	384	13.3
Topical	54	4	552	16	0	623	21.6
Conization or ATH	11	0	52	67	79	209	7.2
Total	437	4	1,983	371	89	2,881	100

Out of the 2,881 cases, 615 cases were referred back to their physicians.

Concerning the evolution of the treated patients the cure has been considered as destruction of colposcopic images, negative cytology and negative histology, which applying this protocol up to the month of July 2003, has prevailed.

Progression of the grade of pathology was observed in 154 cases, a very small number. Only one case of progression of invasive cancer has been observed. The oncogenic potential increased mostly within the pure OR, with a major number of cases that evolved into HPV and dysplasia.

We wanted to demonstrate the effectiveness of the application of cytology associated with colposcopy and histology, with elevated attention and early diagnoses of patients with OR, who have had up to now an apparently very good health status.

We analyzed the methodologies, based on their descriptions and achieved a classification of the pathologic cases, and with this, the benefit of a suitable and proportional therapy to the diagnosed pathology (Table 3).

Table 3. — *OR treatments.*

	Pure OR	Herpes	HPV	Dysplasia	Cancer	Total	%
Cure	86	0	1,005	195	44	1,330	66
Improvement	8	1	78	63	1	151	7.5
Reccurrence	1	0	26	2	0	29	1.4
Persistence	21	0	300	9	0	330	16.5
Progress	87	0	56	110	0	154	7.7
Death	0	0	0	0	4	4	0.9
Total	203	1	1,465	370	49	1,998	100

In fact, local destructive treatment (LDT) was applied to the majority of patients, with cryosurgery the most applicable. Many patients were transferred back to their personal physicians so follow-up data are not available.

We visited different provincial communities, making diagnoses applying treatment and imparting indications to the local area medical staff. Our population of women have five times more chance of presenting with uterine cervix cancer in comparison to women in industrialized countries. These numbers can double if the patients do not have the possibility to participate in an uterine, cervix cancer prevention program.

HPV infection, alone or associated with dysplasia or cancer, corresponded to 4,159 cases, representing 83% of the total OR and 46% of the total studied population. The connection between HPV infection and all dysplasias (92%) with cancer diagnosis (70%) was remarkable.

Conclusions

This study confirms the real incidence of oncogenic risks in Panama. It demonstrates the evolved diagnoses in a favorable light for the patients.

In conclusion, modification of the health prevention policy is necessary, assigning leadership to the National Oncology Institute, as the central entity, supported by the National Association Against Cancer, different clinics, health centers and the private sector, as the only plausible mechanism for its application and easy control [13-15].

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