

Screening of cervical cancer: 27 years experience in six Republics of Panama

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Summary

Between the years of 1983 and 2010, a program of screening of patients was conducted in six of the Republics of Panama, applying cytology, colposcopy, and directed biopsy when required. In the community of Pocri de Los Santos, a tour of 33 rural areas was included in 27 years of consecutive coverage. This allowed to confirm that application that screening was successful, resulting in initial, evolutionary, or final diagnoses. These were of extreme importance because they indicated the disease and its response to conservative treatments applied and to the fact that the cancer evolution was nil.

Key words: Cervical precancerous lesions; Colposcopy; Early diagnosis.

Introduction

The rural preventive tours for uterine cancer commenced in December 1983 on Isla Grande (Colon). Fifty-four women were examined and showed an oncogenic risk (O.R.) in 17% of the cases. Successively, 14 communities of the other six provinces of the Republic of Panama were covered and 2,998 women underwent 5,472 colposcopies, and cytology - histologic exams when needed.

The analysis of the group of patients considered as O.R. in an integral form was found in 47.8% of the cases, in comparison with 33.2% of the ones found in the community of Pocri de Los Santos, and the national average of Panama, which was 53.5% [1, 2].

The results were based on the evidence of the follow-ups included until 2010 and showed a success rate of 87% achieved with the treatments, which were predominantly conservative and localized.

The author considered the need to divulge at both a national and at an international level the statistics obtained in the present scientific study. The results included a low incidence of cervical uterine cancer risk and an evolution of zero for cancer in the annual monitoring completed with a disciplined assistance of the patients over the 27-year period.

Materials and Methods

During the 27 years of rural medical touring, 71 visits were made and a total of 2,998 women were evaluated, and 5,472 colposcopic studies were performed. Special attention was given to the population of Pocri de Los Santos. In 33 tours conducted until 2010, 898 women were examined. As expected, almost all the patients were objectively studied. Follow up was carried out annually and on occasion, bi-annually. Both colposcopy and cytology were contemporarily performed and supplied immediate information concerning the extent of lesion, where applicable. Biopsy was taken and analyzed when diag-

nistically suggested. All the results obtained were studied and gave initial information regarding initial, evolutionary, or final diagnoses until 2011 [1, 2].

Results

In Pocri de Los Santos, 298 (33%) patients were found with O.R. On the contrary, the results in the other groups of Panama, the O.R. was higher (53.5%). These findings reflected a low incidence of cancer risk in the Pocri population [3]. The results of the preventive methods applied are reported in Table 1.

Cytology confirmed that most common pathologies was HPV pure infection without dysplastic or neoplastic lesion in 36.5%, while the false negatives (negatives + inflammatory lesion) reached 57% (Table 2).

The atypical transformation zone (ATZ) was the most frequent, followed by the atypical re-epithelization zone (ARZ), leukoplakia (L), and condyloma (HPV), in 33.6%, 26%, 18%, and 17% respectively. The false negatives reached 21.5% (Table 3).

Table 1. — *Diagnosis and O.R. according to the different lesions in the community of Pocri de Los Santos.*

Diagnosis	No	% O.R.	Percentage distribution O.R. in the population Total (898)
Clinical O.R.	62	21%	6.9%
Pure or alone HPV	189	63.4%	21%
Mild dysplasia	4	1.3%	0.4%
Mild dysplasia / HPV	29	9.7%	3.2%
Moderate dysplasia	2	0.7%	0.2%
Moderate dysplasia / HPV	5	1.7%	0.5%
Severe dysplasia	1	0.3%	0.1%
Severe dysplasia / HPV	1	0.3%	0.1%
CA in situ / HPV	3	1%	0.3%
CA invasive / HPV	1	0.3%	0.1%
Adenoca	1	0.3%	0.1%
Total	298	100%	32.9%

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Table 2. — Cytological results in 298 patients with O.R.

Cytology	Patients	
	No.	%
Not performed	7	2.30%
Negative	63	21.1%
Inflammatory lesion	107	35.9%
Pure HPV	109	36.5%
Mild dysplasia	1	0.3%
Mild dysplasia / HPV	6	2%
Moderate Dysplasia / HPV	3	0.3%
Severe dysplasia	1	0.3%
Cancer in situ / HPV	1	0.3%
Total	298	100%

Table 3. — Colposcopy results in patients with O.R.

Image / Picture	No.	Patients	
		%	F. Neg.
Not performed	3	0.4%	
Original mucosa	33	11%	
TRZ	31	10.4%	21.5%
Alt. Metaplasia	25	8.4%	
HPV	51	17%	
Leukoplakia	54	18%	
ARZ	79	26%	
ATZ	10	33.6%	
Others	12	4%	
Total	298	99.8%	

Table 4. — Biopsy results in the O.R. group.

Report	No.	Patients	
		%	F. Neg.
Negatives	6	4.60%	
Cervicitis	31	23.60%	32.4%
HPV alone	56	42.70%	
Mild dysplasia	4	3%	
Mild dysplasia / HPV	21	16%	
Moderate dysplasia / HPV	7	5.3%	
Severe dysplasia	1	0.7%	
Severe dysplasia / HPV	2	1.5%	
Invasive Cancer	1	0.7%	
Total	131	100%	

The biopsies performed were a total of 131. The most common pathology was pure HPV, followed by mild dysplasias associated with HPV, in 42.7% and 16% respectively. Here the false negatives reached 32.4% (Table 4).

Of the patients considered with cancer risk, the evolution in 82 cases is unknown, although most were treated with cryotherapy or cauterization. Twenty-three cases were pending review and 185 cases were followed up. Many of these cases were reviewed annually, reaching up to 29 check-ups. The achievements confirmed the elimination of the high incidence of the effect produced by the most important inducing agent, which was the papilloma virus, and its most frequent picture included was ATZ. Sixty-nine percent of treated cases corresponded to pure papilloma, 15% to clinical lesion, 14% to dysplasias, and 1% to cancers.

The treatments were conservative with cryotherapy, cauterization and/or topical application of medicaments

[4]. Surgery was recommended in the cases that required it and were referred to their physicians who accepted the indication. Two cases of cancer in situ and one invasive cancer were referred to the Oncology Institute, whose diagnosis was made during one of the tours.

At the end of the study in 2010, healing was achieved in 87% of the patients, 6.5% showed persistence, 3.7% showed improvement, 1% showed recurrence, and 2% showed progression. It should be mentioned, that progression only occurred in the minor grades and the evolution to invasive cancer was zero. Regarding the cured cases, 35% of these were result spontaneous, as have also been reported by other researchers in other latitudes [5].

Discussion

Although there are many opinions regarding an incurable HPV infection and its effects, this study differs considering both the progress reached in a systematic form and by the annual follow up of the same patients in 27 years of study.

The author of the present study did not vary the dynamics of care at any given time and did not hesitate to repeat treatments to achieve eradication of the lesion found in the following years. Also, the perseverance in personal attention allowed the author to confirm that this population remains as low risk of cancer, compared with the numbers found in the Republic of Panama, in all categories of pre-cancerous lesion, including HPV, mild, moderate, and severe dysplasia, associated or not with HPV, and cancer alone [6].

The local conservative treatments were characterized by the ease in the application, contained expense, reduced waiting time, mainly due carrying out the recommended follow-up every three months until healing was achieved [7].

A decrease of cervical cancer was seen in this decade and although the incidence of Papilloma Virus is maintained and has doubled its association with dysplasia, the response to cryotherapy has been a resounding success [8].

Conclusions

The present study shows that local conservative treatment triggers the immunologic system and therefore, the antigen-antibody response, achieving the resistance to the papilloma virus infection; the acquired immunological response determines the relation between dysplasia and cancer [9]. The natural immunological response was found in 35% of the cases, and can only accepted as such, without considering the parameters required for a thorough investigation [10].

The epidemiological methodology is valuable considering the simultaneous application of colposcopy and cytology, as it reduces diagnosis time and treatment, and the follow up is carried out in a simple and disciplined form. Furthermore, being able to performed statistics demonstrates that the conservative local treatments are more than sufficient to eliminate the precursory lesions that

lead to cancer of the cervix, vagina, and vulva, whose costs are really insignificant, as they avoid the invading cancer which is more expensive [11, 12].

In conclusion, the author reaffirms that the perseverance, education and the will of paramedic and medical staff to perform studies, such as the present, with volunteers committed to this work, will maintain the achievement: “*evolution to cancer: no case*”.

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