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30 years of colposcopic studies: validity of local destructives treatments

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Summary

The effectiveness of local destructive treatments (LDT) applied in patients due to cervical pathology oncogenic risk (OR), were followed and verified in 396 patients who came to our attention, focusing on the type of pathology, type of treatment received, diagnosis clinical evolutionary, and results of the new study applying polymerase chain reaction (PCR), and above all, the time between the diagnosis, treatment, and PCR findings. The clinical evolution of the same reports achieved a healing rate of 82% followed by persistence 8.3%; improvement 4.8%, recurrence 2.8%, and only one case of progression 0.2%. The elapsed time in initial care and treatment was almost immediate, as the pathology diagnosis was considered on an emergency basis. Successive controls of these indicated that 119 studies of routine colposcopy were carried out, on an average of the first three years and with a maximum follow up of 30 years, with over 30 routine colposcopies that achieved healing in most of these. In 2011 and 2012, we added to the usual diagnostic methodology, molecular biology, and 119 studies were performed in those patients, resulting in only five negative cases. Most studies were classified as high risk papillomavirus (HR-HPV), corresponding to subtypes 31, 35, 18, and 16.

Key words: Local destructive treatment; Oncogenic risk; Colposcopy; Cervical cancer.

Introduction

Cervical cancer is the second female tumor worldwide with the highest incidence in the developing countries [1]. In the developed countries, the Papanicolaou test has significantly reduced its frequency [2]. Due to the role of human papillomavirus (HPV) infection in the carcinogenesis [3], two new approaches were adopted to fight this neoplasm: vaccination in younger women [4] and HPV detection in the remaining population. The organized screening prevention has reduced the incidence of cervical cancer by about 75% in higher income countries during the last 50 years [5]. The challenge for the future is to extend the possibility of effective prevention also in developing areas of the world, with the aim to detect this neoplasm that is today a diffuse cause of death.

Materials and Methods

In the 30 years of study, 12,679 patients were treated and 6,411 of them were diagnosed as oncogenic risk (OR), from which 4,353 corresponded to non-clinical HPV or clinical HPV associated with dysplasia or cancer. Most of these underwent local destructive treatments (LDT), and a follow up was performed to evaluate the effectiveness of the treatment, either cryosurgery or diathermocoagulation or cautery [6].

We realized that achieving a natural immune response against HPV infection is almost impossible, since the acquired immune response requires inflammation. It is with cryosurgery and/or cautery that we managed to activate the immune system, which undoubtedly has been reached. This was demonstrated by routine colposcopy, applied every three months until a clinical cure was achieved, which signified the destruction of viral cytopathic effect, visible to colposcopy. Similar experiences have been described by various authors, according to the criteria reported by S. Dexeus [7-9].

When we talk about cryo, we refer to provoking a lesion in the affected area by freezing it at approximately -60°C, killing the cells through water intoxication, while cautery produces desiccation of cells and thus, the expected immunological, local, regional, and systemic response.

The selected LDT method was applied, either by itself or combined, achieving good results. The preferred method was cryosurgery and the one that been applied was the slow method, in which we first froze the lesion for two to three minutes, then it was slowly thawed. The lesion was then frozen again for two minutes maximum and was slowly thawed once again. We complemented the treatment by using tetracycline, vitamin, and albothyl. Within a month, we conducted clinical inspection and then, after three months a routine colposcopy was performed [5].

We selected 396 patients with OR diagnosis, who had their follow ups during this century, which corresponded to 265 HPV, 117 dysplastic cancers, seven cancers, and 11 pure ORs (Table 1). Among the group, there were 321 cases that were treated with cryosurgery; only 51 cases with a combined treatment of cryosurgery and cauterization and 87 cases with cauterization only. We repeated this treatment as often as necessary, if the clinical lesion could not be eradicated within one or three months. Treatment was performed as soon as we diagnosed the OR and a follow-up was performed after three months and a new treatment was applied if the lesion persisted. After the lesion was removed, successive controls were performed every six months and/or annually.

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Table 1. — The *396 cases of OR under surveillance.*

OR classification	N° of cases	Percentage
HPV	265	66.7%
Dysplasia	113	28.5%
Cancer	7	1.8%
Pure OR	11	2.8%
Total	396	100%

Table 2. — *Elapsed time and PCR.*

Periods (years)	N° of patients
1 - 5	199
6 - 10	94
11 - 15	41
16 - 20	25
21 - 30	12

Table 3. — *III PCR and pathologic evolution.*

Pathology	Healing	Persis-tence	Impro-vement	Recur-rence	Progres-sion	Total
Pure OR	11	0	0	0	0	11
Cancer	7	0	0	0	0	7
Dysplasia	98	2	7	3	1	111
HPV	210	31	12	8	0	261
Total	326	33	19	11	1	389*

*Include six pending cases for clinical assesment.

Patients were assisted with clinical controls every six months or every year, achieving a definitive evolutional diagnosis, in which healing prevailed. The PCR test was applied at one to five years in 199 cases, at ten years in 94 cases, at 15 years in 41 cases, at 20 years in 25 cases, and at 30 years in 12 cases; they all resulted positive, except for the five negative cases and all of them resulted with HR-HPV (Table 2).

Results

From the 396 cases, in which a follow up was given until date, 326 of them were considered cured due to the elimination of the viral cytopathic effect, verified by routine colposcopy. Only 33 cases persisted, 19 improved, 11 recurred and only one cases progressed (among dysplastic cases) (Table 3). Among the dysplastic cases, there were two pending cases and among HPV, four pending cases.

From a pathological classification perspective, healing was achieved in 100% of cancer cases and pure OR, but dysplastic and pure HPV cases prevailed in 210 and 98 cured cases, respectively, followed by persistence in 31 cases and improvement in 12 cases (Table 4).

Healing was the prevailing clinical presentation and in order to apply a quality control, PCR test was incorporated and applied in 119 women, and it was found that only five cases were negative and the remaining were considered to be HR-HPV, with 31, 18, 35, and 16 as the serotypes most frequently found, in 40, 27, 19, and 17 cases, respectively

Table 4. — *Clinical evolution by pathologic diagnosis.*

Clinical evolution	Pathologies			
	Cancer	Pure OR	Dysplasia	HPV
Healing	100%	100%	87%	79%
Persistence	-	-	2%	11.7%
Improvement	-	-	6.2%	7.2%
Recurrence	-	-	2.5%	1.1%
Progression	-	-		
Pending	-	-		

Table 5. — *PCR in 119 cases.*

PCR results	Nº patients	Percentage
7	2	6.6
16	17	14
18	27	22.7
31	40	37
35	19	16
66	1	1
Negative	5	4.2
Others	8	7

Table 6. — *Clinical evolutions.*

Clinical evolution	Nº patients	Percentage
Healing	326	82%
Persistence	33	8.3%
Improvement	19	4.8%
Recurrence	11	2.8%
Progression	1	0.2%
Pending	6	1.5%

(Table 5). These results with healing clinical findings, despite the virus remaining in the human body, but without producing any cytological or histologic changes that might lead to cancer (as a host) over the last 30 years is what allowed us to say that the LDT has achieved on one hand, the HPV lesion destruction, and its neutralization by specific immunology, but on the other hand with the risk that the HPV chronic infection can lead to cancer (Table 6).

Discussion

Patients that have been managed under a follow-up protocol allowed us to evaluate the therapeutic method, individual response, PCR linkage, evolutional diagnosis, and overall, the ability to convey clear concepts to the patients in order achieve a better life quality [10-12].

Conclusions

In these 30 years of studies, we have demonstrated that local conservative treatments, are valid for three simple reasons:

1) The economic costs of aggressive treatments, compared with surgical ones are much more expensive;
2) The risk, to which the patient is exposed with aggressive treatments, sometimes causes significant damage to the organs;
3) It makes no sense that a low-risk diagnosis must be reached by applying aggressive treatments.

Our experience with the patients managed in this study, indicate that their evolution is flattering, by showing no progression to invasive cancer.

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