

STERIOLOGICAL ANALYSIS OF PERITUMORAL LYMPH NODES IN PATIENTS OPERATED FOR CERVICAL AND ENDOMETRIAL CANCER AFTER BEING TREATED WITH THYMOSTIMULIN

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Summary: We have evaluated, by means of steriological analysis, the dimensions of the lymph node functional areas (cortical, medullary, paracortical, histiocytosis of the sinuses, germinal centers) in regional lymph nodes of women with cervical cancer (15 women) and endometrial carcinoma (6 women) in Ist and IInd stage, treated 8 days before surgery with a dose of 1-1,5 mg/kg of body weight of thymostimulin directly into the uterine cervix.

4 women with cervical and endometrial cancer (stages I and II) and treated with the same doses of physiological saline solutions were used as controls.

The quantitative results show that in the lymph nodes of women treated with thymostimulin there is a statistically significant marked increase, ($P < 0.001$), of the paracortical areas.

INTRODUCTION

In our previous study, published in this center at the 3rd Meeting of Gynaecological Oncology in 1985, we pointed out the action of Thymostimulin (Tp-1) (1) on peritumoral lymph nodes in gynaecological tumors (3, 4).

We have now carried out new investigations that further verify what we had previously affirmed (5).

These deal with steriological analysis of the functional areas of excised lymph nodes, and are carried out in collaboration with the Pathological Anatomy Institute of Siena University.

CG Germinal center

C Cortical

PC Paracortical

M Medullary

IS Histiocytosis of the sinuses.

MATERIAL AND METHODS

Cases analysed include:

15 females with cervical cancer (stages I and II);

6 females with endometrial carcinoma (stages I and II)

who came under our observation during the period from 1983 to 1985.

All the patients were treated 8 days before surgery with a dose of 1.5/kg body weight of Thymostimulin directly into the uterine portio. Four (4) women with cervical and endometrial cancer (stages I and II) were treated with equal-sized doses of saline solution. They were used as controls.

Surgery consisted of total hysterectomy with complementary lymphadenectomy.

Stereological analysis was carried out by means of a grid having the following characteristics: 200 points; real area 200 cm²; effective area at the level of the preparation 0.32 mm² (250 ×).

An average of 6 lymph nodes per case were appraised (fig. 1).

Lymph nodes invaded by metastasis (5 among those treated and 1 not treated) have not been considered in this study.

RESULTS

The results obtained and statistically elaborated furnish the following evaluation as regards standard deviation and Student t. In the standard deviation, the in-

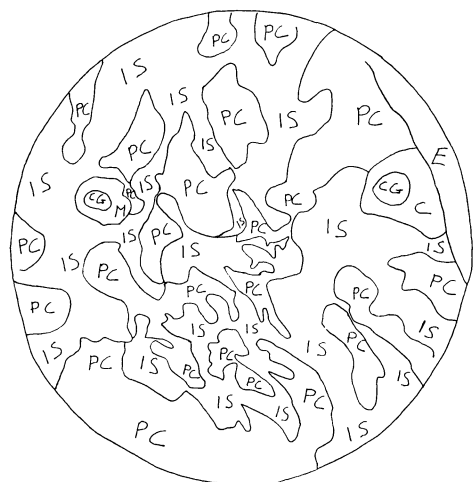


Fig. 1.

	Portio	Endometrium	Control
	%	%	%
CG	1.22 ± 1.791	2.3 ± 0.383	0.43 ± 0.535
C	4.47 ± 3.377	6.37 ± 5.269	7.9 ± 5.194
PC	62.55 ± 11.886	56.65 ± 16.806	13.77 ± 3.457
M	5.6 ± 9.459	6.05 ± 5.963	36.42 ± 9.904
IS	25.1 ± 6.112	22.2 ± 6.21	22.62 ± 39.775

Fig. 2. – Percentage distribution of the various components examined and relative standard variation.

crease of the paracortical lymph nodes is very marked, both in the portio and in the endometrium, and there is a prevalence of germinal centers in the endometrial tumour (fig. 2).

The opposite pattern is observed in the medullary.

The Student t in the portio versus control indicates as not significant the germinal and paracortical centers, as well as the medullary, but in a negative sense.

As regards the endometrium versus control, the picture is analogous with the preceding one, and the only difference

lies in a further significance of the histiocytosis of the sinuses but in a negative sense.

COMMENT AND CONCLUSIONS

Our report concludes here for the moment in that from statistical processing (Student t level of significance $P < 0.05$), the paracortical area was observed to be greater than in those treated with distilled water.

The cortical and medullary areas, those occupied by follicles and germinal centers are not significantly modified in treated females as compared with controls.

On the contrary, problems in administering Thymostimulin exist:

1) administering Tp-1 doses; 2) calculating the duration of its effect; 3) the drug's effect on more distant lymph nodes, is a very difficult problem to solve in vivo.

The information obtained from immunological monitoring is normal up to now. The immunological monitoring is applied periodically to the group receiving thymostimulin, and all those we operated are now in good health.

We only hope that this contribution, which has demonstrated a real increase of the paracortical area of lymph nodes, may lead to better prognoses. The future will tell.

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