

OPC (ENDOTELON) in the treatment of post-therapy lymphedemas of the upper extremities

RESUME

A double blind study against placebo was undertaken to evaluate the effectiveness of OPC (Endotelon) in the medical treatment of the lymphedemas in the upper extremities occurring after treatment for breast cancer. After 6 months the active product appeared superior to the placebo in which the initial positive action wore out. Pain, cutaneous tension and movements were clearly improved using the active product. The functional isotopic parameters involved with the intralymphatic transport were improved but the interstitial collection remained unchanged. Endotelon is therefore a lymphostimulant and perhaps used as a treatment of lymphostase in association with other physical methods.

KEY WORDS

Lymphedemas Oligimer procyanidolics treatment

INTRODUCTION

The frequency of lymphedemas of the upper extremities after breast cancer treatment is still prominent despite the less aggressive, more preserving therapies. These secondary edemas are essentially edemas of a small size, with a moderated increase of the extremities circumference and can be seen as a sole medical treatment aimed at lymphotrope. Among the classic medications used for this pathology benzopyrones compose a large part of the divers components¹. The OPC's belong to a group of the gamma benzopyrones and their action on the lymphatic system has already been established². We wanted to verify if this OPC action on the lymphatic system could be found post-therapeutic edemas of the upper extremities occurring in the follow up treatments of breast cancer.

MATERIALS – METHODS

This study was a double blind controlled against a placebo led by three different clinicians. Two parallel groups were chosen randomly receiving either 300 mg of OPC (6cp/day taken two times) or the same quantity in placebo. The treatment lasted 6 months.

63 patients with ages from 31 to 64 years old were treated. 33 received the OPC, 30 received the placebo. The patients in this study must have had a recently formed edema in the prior 18 months in which the circumference exceeded 2 cm.

A lymphoscintigraphic assessment using the Pecking method would confirm the existence of a pure lymph edema or one associated with a venous pathology with objective

parameters designed to evaluate the action of the medication at the end of the treatment during a second control exam.

Simple clinical parameters were used, a clinical score established on an evaluation grid comprised of 5 distinct signs (maximum perimetric difference, integument tension, muscle mass mobility, pain, and nervous disorders) and the calculation of the volume of the member by extrapolation. Results were noted before the start of the treatment and then at 1, 3 and 6 months.

RESULTS

The 2 groups were homogenous at the beginning and no significant statistical difference is noted (Table 1).

Table 1 Characteristics of the patients at the beginning of the study

	Age	Weight	Size	Score	Vol.	T _	Clarity	VCL
OPC	51.8	59.1	162.0	8.37	2432	178.90	23.16	7.58
Placebo	52.0	56.6	161.9	8.31	2572	195.10	23.29	7.47

After six months the modifications of the collected parameters are shown in Table II.

	0	1	2	3	6
Score	OPC	8.31	6.97	6.45	6.34
	Placebo	8.37	7.64	7.75	8.37
Volume	OPC	2431.87	2419.28	2406.23	2428.75
	Placebo	2571.76	2568.01	2574.28	2557.29
T _	OPC	178.90			180.54
	Placebo	195.10			201.36
Clearance	OPC	23.16			24.25
	Placebo	23.29			20.7
VCL	OPC	7.58			8.03
	Placebo	7.47			7.50

Table II: Evolution of the parameters under treatment

DISCUSSION

The preserving surgical techniques and the lowering of the radiation doses for the treatment of breast cancer did not lower the frequency of post-therapeutic edemas of the upper extremities. It is now a question of what we can call the little big arms as opposed to imposing lymph edemas that we knew before. Women who see an edema appear do not want wait and want immediate treatment. Medical treatments, placed side by side with physical techniques of manual lymphatic drainage, are beginning to play an important role.

Benzopyrones are known to stimulate lymph glands (1). We have already demonstrated the action on healthy subjects of alpha benzopyrones (4,5), OPC, gamma benzopyrone of the group flavanes (2).

The OPC used in this double blind study against placebo appears to greatly improve the lymphatic stasis of the small big arms.

Subjectively the patients seemed to improve during the first six weeks of the treatment no matter whether they were taking OPC or the placebo. This improvement does not follow during the time under OPC while the state of discomfort comes back progressively in the patients receiving the placebo. This shows that there exists a placebo effect on the lymphatic system as well as on the venous system and is there indispensable to eliminate this in any long-term study. Clinically, the functional score is significantly improved while using OPC. $P = 0.04$ for the cutaneous tension, $p < 0.001$ for mobility, the disappearance of pain in 59% of the patients compared to 13% taking the placebo ($p = 0.02$), significant improvement in feeling sluggish (40% for the OPC group, 0% for the placebo group $p = 0.02$).

The measure of volume shows a progressive decrease in the member's volume in the OPC group while in the placebo group the volume hardly moves at all.

The evolution of the lymphoscintigraphic functional parameters confirms the action of OPC with a significantly statistical difference of the lymphatic circulation speed and the interstitial half life of the colloid were significantly improved while the interstitial lymphatic clearance was unchanged. This would allow us to think that the stimulation is essentially more on the vascular lymphatic system than on the lymphatic distal unit.

It seems then that the OPC as with other benzopyrones the total dose used in this work is still insufficient. A dose effect exists (6) and the lymphotrope action is a direct function of the weight quantity of the active product used.

CONCLUSION

The principal OPC ingredients of Endotelon have a lymphostimulant action and can be proposed in a medical treatment of lymphostasis in association with a physical treatment classically admitted as indispensable in the rehabilitation of the injured lymphatic system.