

The Effect of Endotelon on the Capillary Fragility Index Of a Specific Controlled Group: Cirrhosis Patients

Introduction:

Hemorrhaging accidents represent in gravity and frequency the major complication of cirrhosis of the liver.

Despite the constant progress made in the areas of biological, isotopic and endoscopic exploration the etiopathogenous of these hemorrhages are still complex. Combining, in effect, the responsibilities of local lesions classically unleashing (vericose veins in the esophagus and stomach, digestive ulcers) and of the anomalies of the hemostatic that are found in cirrhosis patients frequently (75%), multiple and of varying degrees (10, 11). Among these anomalies the most renown and incriminating:

- A decrease in the synthesis of the plasmatic factors in coagulation.
- A thrombopene by spleenic sequestration, peripheral destruction or medullary hydroproduction can equally matched by thrombopathy.
- A consuming coagulopathy with a localized secondary fibrinolyse.
- Rarely, a primitive increase of fibrinolytic activity.

It is noted that the vascular time of coagulation is rarely explored. The OPC vegetable extracts of a flavan nature have the property of increasing capillary resistance. This has been demonstrated in different animal pharmacologies and in clinical pharmacology where authors showed a normalization using OPC of the capillary resistance that had been artificially lowered by taking acetyl-salicylic (4).

We were led to study the effect of an Endotelon treatment on our cirrhosis patients starting with the following hypothesis: Reinforcing the vascular coagulation time could contribute to ameliorating the global hemostatic and to alleviate the hemorrhaging risk of the subjects.

Material and Method

The Subjects

Twenty patients from the digestive pathology department at Desgenettes Hospital were included in this study between March and July of 1982. They each showed signs of hepatic cirrhosis proven by a laparoscope and/or a histology. Conforming to foreseen exclusion criteria protocol the subjects:

- Did not show hemostatic anomalies linked to a extra-hepatic pathology

- Were not found to be in a state of decompensation, hemodilution or renal insufficiency
- Finally, they were not taking vasculo-protective medication

Forms of the Test

The test was controlled and conducted as a double blind against a placebo, formed by two parallel groups of 10 patients each. Members of each group were drawn by lot.

The patients of group E received daily 6 pills of Endotelon with a dosage of 50 mg of OPC for each pill. Two pills were taken three times a day at mealtime for 8 weeks.

The patients in group P received a placebo under the exact conditions as did group E.

The hemostasis was assessed before and after the therapeutic sequence by measuring the index of the capillary fragility and by a biological result comprising the five following examinations:

1. Rate of prothrombin
2. Length of time of the cephaline activity
3. Length of time of bleeding
4. Rate of fibrinogen
5. Blood platelet count

The capillary fragility index was determined with the help of a Parrot angio-sterrometer applied to the pre-sternal: Skin surface where red crescent shaped depressions were appearing from -20 to -25 and -30 cm de Hg were counted.

A score was established starting with these three numbers according to a scale already described (13) and going from 0 to 12 units.

From 10 non cirrhotic patients, considered as witnesses, the normal value obtained was 0.8 with (between 0-6).

Results

We first wanted to verify the comparability of the groups. Upon viewing Table 1 we note that out of the eight criteria used only one variance was noted between the two groups: The diagnosis of cirrhosis is significantly more recent in Group E (2.5 years) than in Group P (5.3 years). However, since this criterion only reflects indirectly the duration of the hepatic lesions and especially since the other criteria, in particular the number of primo-decompensations, show no difference.

In examining Tale 2 that reflects the totality of the given relatives of the hemostasis it appears the only variance is the parameter exploring the vascular duration.

We see (fig 1) that the capillary fragility index (IFC):

- Decreases 1.8 units (-46%) in Group E.
- And it only decreases 0.3 units (-6%) in Group P

If we compare these two groups for this parameter by a Mann & Whitney nonparametric test, there is no difference in the time Week 0. On the other hand the difference is found at the limit of the of the 5% threshold in the time Week 8.

For the other parameters exploring coagulation the givens are slightly agitated at Time 0, with no difference between the two groups at the end of the treatment.

As for the other hepatic parameters the absence of variation between Week 0 and Week 8 (Table 3) allows us to assure ourselves of the stability of hepatic insufficiency during the test and to state the good biological tolerance of the OPC in the 10 patients who were treated.

The undesirable side effects observed were all of a digestive nature. Of the 7 patients concerned 3 belonged to Group E. The reported troubles were:

- Group E:
 - One case of isolated stomach ache.
 - Stomach aches accompanied by nausea (2 cases).
- Group P
 - One case of constipation
 - One case of pyrosis
 - One case of anorexia

These diverse digestive problems are rather banal and common with people with cirrhosis. Their importance is sensibly identical in each of the groups treated, with, however, there were elements of pain appearing more often in Group E.

Discussion

The goal of this study was to study the effect of an Endotelon treatment hemostasis in people with cirrhosis. There were two observations:

- The index of the capillary fragility that explores the vascular time for coagulation increases dramatically in patients with cirrhosis who were studied: 4.55 on the average (between 1 and 10), while our normal value had been 0.8 on the average (between 0 and 6).
- The frequency of secondary digestive effects arising during treatment seemed to high (7/20). This acceptable limit seemed to proceed:
 - On one hand from the classic digestive susceptibility of people with cirrhosis.
 - And on the other hand from the daily dosage of the test of 6 pills.

Conclusion

For a controlled test, double blind against placebo with 20 people with cirrhosis we showed that an Endotelon treatment (300 mg a day of OPC) significantly ameliorates the index of capillary fragility in the patients without causing variances in the biological hepatic parameters.

Literature about the therapies of digestive hemorrhaging of someone with cirrhosis is only interested in the curative aspect of the episodes (8, 19, 12). Very little preventive treatments are proposed.

Associated with the defects of hepatic synthesis are the plasmatic factors. The coagulopathy of consuming are often evoked in the pathogen of the hemostatic problems of someone with cirrhosis.

These phenomena of the intra-vascular coagulation bring in thrombopenia, a fall in I, II, V, VIII factors, a lessening of the rate of the plasminogen and fibrinogen. They can also set off and be maintained by parietal vascular alterations.

Consequently, the results of this study allow us to think that it would be very interesting to pursue over a long period of time in order to research the effects of an Endotelon treatment on the frequency of hemorrhaging complications arising in people with cirrhosis.