LIVER OROTATE

The Curative Effect of a Combination of Calcium-Orotate and Liver-Orotate on Primary and Secondary Chronic (Aggressive) Hepatitis and Primary and Secondary Liver Cirrhosis.

From a Lecture held before the International Academy of Preventive Medicine by Hans A. Nieper, Dept. of Medicine, Silbersee Hospital, Hannover

In previous reports I had repeatedly drawn attention to the effect of Calcium-orotate on osteoporosis, osteochondrosis and malignant decalcification processes, as well as upon chronic immune diseases of mesenchymal tissue and the mucus membrane of the colon. Lithium-orotate was also presented in a publication as being extraordinarily effective at a low dosage in the treatment of endogenous depression, alcoholism, juvenile epileptiform diseases, and above all, genuine migraine. The high complex constants of the orotates enable the mineral to be carried in a bound state through the exterior cell membrane and to be released first, in the process of their metabolism at the plane of the mitochondria, microsomes and lysosomes. (1-5)

In the course of the clinical application of Calcium-orotate (5 years) and Lithium-orotate (2 years) we have carried out a large number of liver biopsies - the checking of eventual side-effects on the liver not being the main reason for the biopsies, yet as a rule of quite considerable secondary interest.

Thereby there not only proved to be complete absence of side-effects of the said orotic-acid salts on the liver, but in the case of Calcium-orotate there was also a good effect, and the combination of Lithium-orotate with Calcium-orotate - a truly striking curative effect on practically all chronic inflammatory processes of the liver, having their origin in the liver mesenchyme.

Magnesium-orotate does not have this effect and neither could the same be proved true after oriented examination for other orotic complexes, a certain exception being orotylcholinate, to which Platt incidentally has already ascribed a sealing effect on the lysosomes of the liver mesenchyme. It is quite proven that in his research Platt found that chronic hepatitis is very essentially sustained by means of a pathological secreting of lysosomal enzymes.(6-7)

In this connection it is important to remember that in practically all forms of chronic hepatitis and cirrhosis of the liver, antimitochondrial, antimicrosomal and antilysosmal anti-bodies (AMA) are to be found, which are being more and more regarded today as the pathogenic principle of the said chronic inflammatory liver diseases (Deborah Doniach). Recently the induction of AMA after a short-term virus hepatitis was proved, as on the whole the induction of AMA and anti-nuclear anti-bodies in the liver can be the consequence of a persistent virus infection. (8)

From differential pharmacodynamic considerations and on the basis of our knowledge which we have of the transport mechanism of the orotates, we can probably explain the healing effect of Calcium-orotate and Lithium-orotate in the following way:

A calcium-ion is set free from the Calcium-orotate at the level of the mitochondrial membranes, which may be effective as a long-term protector against constant immune aggression by AMA. From the lithium-orotate, on the other hand, a lithium-ion is released at the level of the mitochondrial membranes and likewise with great probability at that of the lysosomal membranes, which deplaces Na, thereby dehydrating and stabilizing the lysosomal membranes. Detailed experimental research will be published elsewhere in the future. In any case, after a dose of 150-300 mg Li-orotate daily, a drastic drop of increased SGOT, SGPT and alkaline phosphate can be observed while the gamma GT lags behind in its fall. Li-acetate seems to posses this effect only to a far less extent. Nevertheless at this stage it must be noted that the true curative effect of spring waters on the liver is very essentially due to their Lithium concentration (Henniez, Vichy). According to Loisy, Arnaud, de Grossuvre and Amelot, the lithium level doubles during a course of treatment in Vichy. The detailed works of these authors should be specially drawn to the attention of interested readers at this point. (9)

The treatment of liver patients with Calcium-orotate in combination with Lithium-orotate has still another very fundamental advantage in as much as Calcium-orotate can compensate the side-effects of a long-term cortisone therapy. This is effected in particular by means of an improvement of the calcium fixation in the bones and the avoidance of a negative calcium balance, and furthermore by the protection of the cartilaginous system and prevention of a defective calcium transit at the heart muscle. In the case of three of the following mentioned patients, this protection from cortisone side-effects by means of Calcium-orotate was evidently of great importance for the overall clinical result. We discovered in addition that persistence of the adynamia of the liver patient, which occasionally causes the latter to despair, is not caused by a failure of the above said therapy, but by an especially large decrease of phosphorus as found in whole-blood analysis. This is probably connected with the calcium binding effect of Calcium-orotate in the bone system, whereby the phosphate-pool (patient on liver diet!!) is heavily burdened. Calcium-orotate activates the excretion of insoluble mitochondrial deposit calcium to a great degree (Rasmussen), whereby the bone-building and thus the phosphate consumption is also activated. (10)

> The whole-blood tests are carried out for us by the firm R. Bayer, Stuttgart. 'Recresal' liquid is suitable fir phosphate subsitution. It is well tolerated and its effect on the adynamia is, for the above mentioned reason, always spectacular.

It should be added that the orotates preferentially enter the cells of the mesenchymal tissue. This is most fortunate in consideration of the continually overlooked fact that chronic aggressive hepatitis and cirrhosis are fundamentally diseases of the liver mesenchyme and not primarily of the parenchyma.

Altogether 14 patients were treated exclusively with Calcium-orotate (without Lithium-orotate). 10 of the patients had chronic aggressive hepatitis (five cases post icteric). Of these, 10 patients had an absolute infaust form of development which could not be averted even with cortisone therapy, Azathiprine, Iphosphamide, Silymarine, different applications of treatment and special therapies in liver-hospitals.

Of the patients with cirrhosis, three had a coarse nodular development with oesophagus-varices, two of them with ascites. In one case there was a shrinking biliary cirrhosis of the liver.

After a period of treatment of a least two years with 3g Calcium-orotate daily, all 14 patients are now free of progressive liver disease. Ascites and oesophagus varices are no longer detectable. In four of the cases with chronic aggressive hepatities, it was necessary to carry out a further cortisone therapy at a decreased dosage. Three patients complained of persistent adynamia, distinguised by a very low phosphorus level in the whole-blood. Therapy with 'Recresal' (phosphate) relieved the symptom. The optimum of therapeutic effect was reached after a period of between 9 and 18 months, not earlier.

With the combination of Calcium-orotate with Lithium-orotate the same good clinical results were reached within a much shorter time, as a rule after 2-3 months. This could be demonstrated in 6 cases with aggressive chronic hepatitis and 3 with cirrhosis, one of them of coarse nodular. To these are added 2 patients with chronic hepatitis and cirrhotic development with haemosiderosis, on of them chronic icteric. As a rule the treatment is effective with 2g Calcium-orotate and 150mg Lithium-orotate daily. Only in two cases with chronic post-infectious hepatitis was an extended low-dosed treatment with cortisone necessary for the normalization of the transaminase values.

Remarkably, the histological evidence from the biopsies in the cases with nodular cirrhosis indicates no substantial aspects of improvement, lymphocytic infiltration being above all just as intense as before. This is so, even when a drastic clinical improvement is observed, with vanishing of ascites, normalization of transaminase, ammonium and mineral and phophate balance and the disappearance of malaise.

On the other hand, in the case of 3 out of 3 patients with siderosis, the symptoms of iron-storage have, under the above therapy, totally disappeared, likewise the hyperbilirubinemia.

Judging from the criterium of the SGOT, SGPT, gamma GT and alkaline phosphatase, therapy with Ca-orotate and Li-orotate has very little effect on fatty liver just as cortisones have no effect here. Even the combination of Calcium-Lithium orotate with cortisone does not bring about any improvement.

Summary

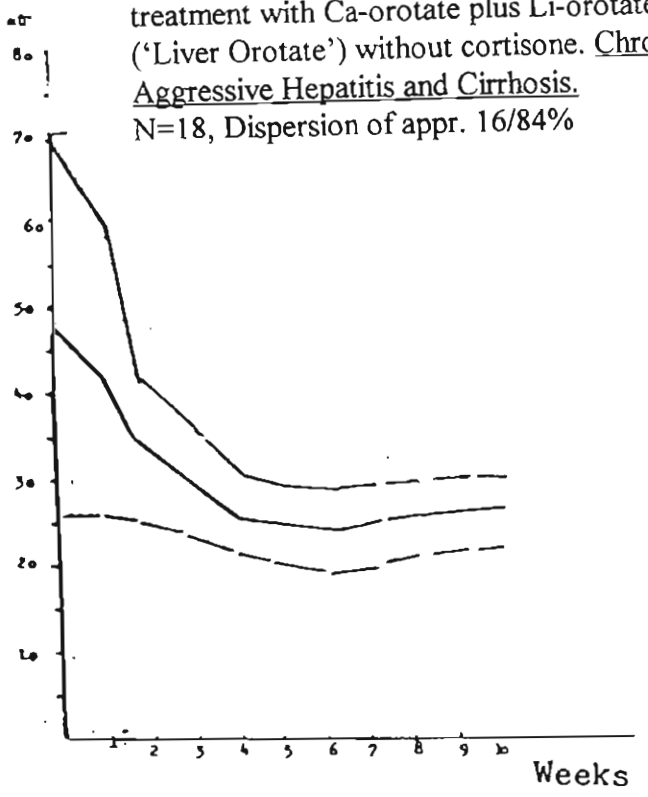
The combination of Calcium-orotate and Lithium-orotate is highly effective in the long-term treatment of chronic aggressive hepatitis and liver cirrhosis. In the treatment of fatty liver the effect is negligible. In serious cases the combination with cortisone therapy

produces exceptionally good results, which are to be achieved neither with Ca-orotate and Li-orotate alone, nor with cortisone alone. Moreover, Calcium-orotate prevents the typical side-effects of cortisone therapy. The effective principle of Calcium-orotate presumably lies in the releasing of Ca-ions at the plane of the mitrochondrial membranes, whereby the aggression of antimitochondrial antibodies may be inhibited. Lithium-orotate releases Li-ions at the lysosomal membranes, so that sodium is withdrawn from them, which is probably equivalent to a lysosomal stabilization. In the leucocyte-model lithium-orotate is a very effective inhibitor of the release of lysosomal enzymes. Platt considers the lysosomal enzymes as being fundamental instigators of chronic hepatitis.

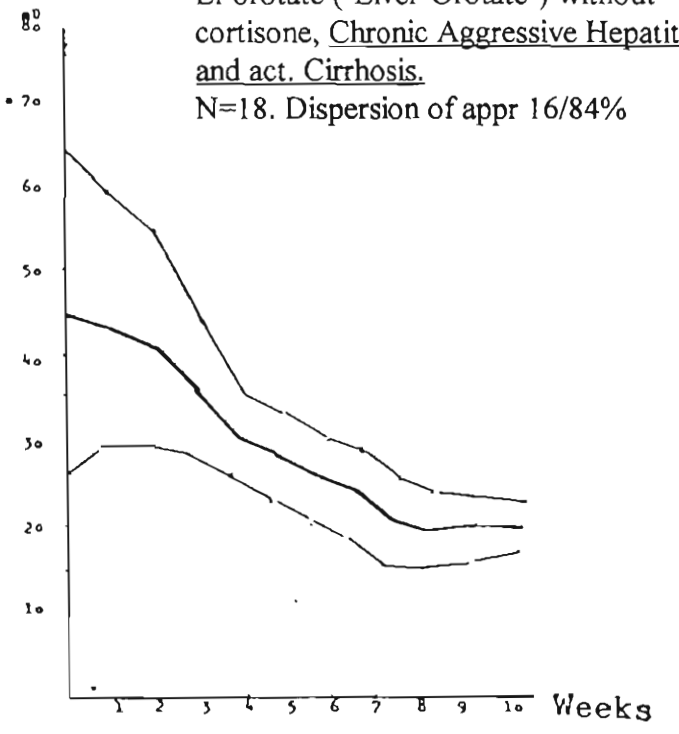
Other orotic-acid salts do not have the above mentioned effect, just as liver therapy with Ca-orotate and Li-orotate has only very little connection with the conventional orotate therapy. The orotic-acid component in the here set-out therapy concept is regarded as the trans-membrane transporter for calcium and lithium into the cells of the liver mesenchyme. In order to avoid adynamy in spite of a good therapeutic effect, a normaliztion of phosphorus in the whole-blood analysis is indicated.

Dr. Hans A. Nieper
21, Sedanstrasse
3000 Hannover

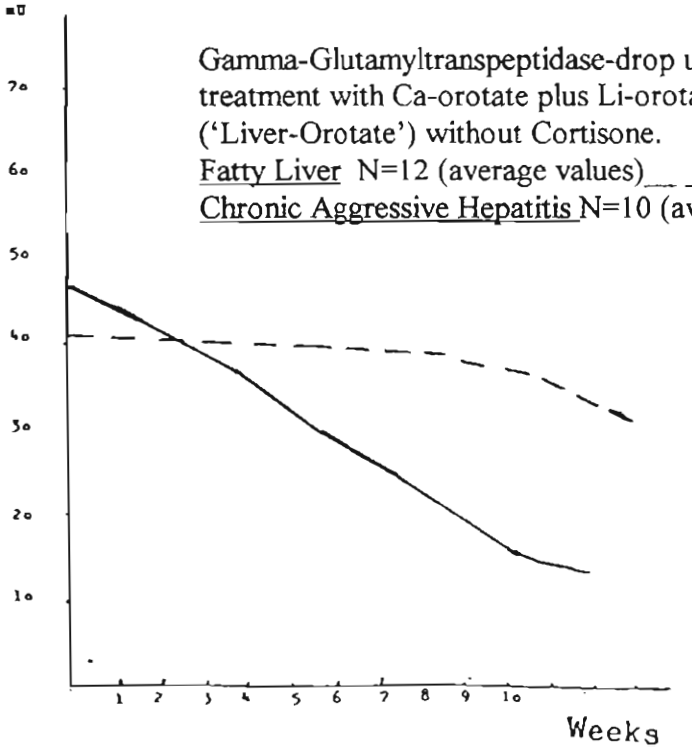
Transaminase drop (SGOT) under treatment with Ca-orotate plus Li-orotate ('Liver Orotate') without cortisone. Chronic Aggressive Hepatitis and Cirrhosis.
N=18, Dispersion of appr. 16/84%



Transaminase drop (SGPT) under treatment with Ca-orotate plus Li-orotate ('Liver-Orotate') without cortisone, Chronic Aggressive Hepatitis and act. Cirrhosis.
N=18. Dispersion of appr 16/84%



Gamma-Glutamyltranspeptidase-drop under treatment with Ca-orotate plus Li-orotate ('Liver-Orotate') without Cortisone.
Fatty Liver N=12 (average values)
Chronic Aggressive Hepatitis N=10 (average values)



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10) Rasmussen, H. Triangel 12,3, 103-109 (1974)
(Triangle)

Additional comments on Lithium Orotate by Dr. Hans A. Nieper:

With lithium orotate, we need only about 7% of the heretofore required amount of lithium, to achieve the desired effect. Dangerous involuntary functions such as muscle tremors enlargement of the goiter and disturbances of the body water retention are drastically reduced. Above all, constant laboratory monitoring of the lithium level of the blood is no longer necessary.

Lithium Orotate helps control not only depression and mania, but chronic inflammatory processes of the liver, and –according to research from Texas—with heart attacks and hardening of the arteries. The fundamental principle of the lithium effect is that it forces excess sodium out of the body cells.

Example:
One 120 mg tablet of Lithium Orotate contains 4.6 mg of elemental lithium. To determine the appropriate dose if you have been taking lithium carbonate substitute one tablet of lithium orotate for each 100 mg of lithium carbonate. From four to twelve 120 mg tablets of lithium orotate may be used for alcoholism. From six to eight 120 mg tablets of lithium orotate may be used for depression. From two to three 120 mg tablets of lithium orotate may be used for migraines. It is important to seek the guidance of a physician to determine the optimum dose. The effective dose could be as little as one tablet a day.