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A MEDICAL APPROACH TO A CANCER THERAPY OF LOW TOXICITY AND LONG-TIME PERSPECTIVE THE NIEPER REGIMEN

By Hans A. Nieper M.D.
The Silbersee Hospital

The directions for cancer therapy according to Dr. Nieper are based on:

1. Activation of the thymus function and of the function of cell-bound immunity.
2. Activation of the formation of ATP (energy-rich phosphates).
3. Activation of the non-specific immunity by BCG and/or staphage lysate.
4. Treatment with Nitrilosides (atoxic carcinostatic substances).
5. Enzymatic de-shielding of membraneous antigens of the tumor cells, with simultaneous prevention of the nidation of tumor cells owing to an intensive fibrin formation.
6. Cytostatic treatment on an atoxic scale, with low doses (slow-down of growth by 5-FU or Vincristine).
7. Activation of lysosomal enzymes inside of cancer cells by means of Zinc Orotate (tablets) of Zinc Aspartate (i.v. injections).
8. Avoidance of food which may favor cancer growth.

For the activation of the thymus function and for the increase in the formation of T-lymphocytes, large amounts of Vitamin A or carotene is required. In order to obtain a sufficient absorption of carotene, the latter must be supplied in the form of carrot juice rich in carotene, together with some cream. It is recommended to administer at least 200,000 to 400,000 Units of Vitamin A per day, or three to four 8 ounce glasses of carotene, with a tablespoon full of cream each.

An analysis of the whole blood must be performed to assay the mineral substances it contains. A normal iron content and a normal zinc level of the blood are of great importance. If need be, iron must be administered intravenously (Imferon, Ferrum Vitis), or a good preparation is given by mouth. Furthermore, Zinc Asparaginate (Inzelloval) or large amounts of Zinc Gluconate must be prescribed for thymus activation. If the zinc level of the whole blood decreases below 6 ppm, an immune paralysis may develop.

Also a decrease in the whole blood magnesium level means immune fatigue since important mechanisms of immune defense such as Properdin, are mg++ activated, as well as important enzymes of the Citric Cycle.

Furthermore, the analysis of mineral substances gives information about the formation of energy-rich phosphates. The activation of the ATP-formation is obtained by the administration of potassium-magnesium-asparaginate (Trophicard, Coroverlan, Inzelloval), and of phosphates (Redresal) together with two lemons per day. By this medication, the serum phosphorus level is diminished for the benefit of intracellular energy-rich phosphates. An additional therapy using Calcium Orotate is instituted in those cases in which a metastasis of the bone system is likely to occur, or has already taken place, especially in the presence of carcinoma of the breast, prostate and thyroid gland. Furthermore, Calcium Orotate (daily dose 2 to 4 g.) is indicated in malignant hypercalcemia and in the presence of a non-specific decalcification due to malignancy.

The non-specific activation of the immune defense is obtained by BCG-vaccination that must always be performed as the first therapeutic measure. The maintenance therapy is performed best by mouth. Staphage Lysates (Diribiotin) are better suited, than the oral administration of BCG. However, the booster effect of the initial treatment with BCG is superior. The intensity of the skin reaction gives a clue to the immunity of the body. Moreover, the prognostic evaluation depends more or less on this reaction. It is advisable to make a differential blood picture, while activating the immunity by therapeutic measures, and to determine either the percentage of lymphocytes that react to PHA, or to have the lymphocytes classified by size, and listed separately, by an experienced laboratory assistant.

The long time treatment using activated Amygdalin (B17-Orotate or Amygdalin aktiv Nadrol) is mainly by oral daily doses of 2-2.5 g. It is important to know that the action of Amygdalin is more effective on the tumor with the slower the growth, the earlier the phase of its development and the higher the rate of respiration. For this reason, the action of Amygdalin on the tumor is increased by enhancing the utilization of oxygen by a larger supply of ATP, by the administration of Thiamin Chloride (Vitamin B1 Chloride) and by a previous or simultaneous X-ray therapy.

In our opinion it is essential to know about these conditions, which play an important role in the understanding and functioning of Nitriloside (Amygdalin) therapy in malignancy.

Clinical and experimental trials have revealed that the action of Amygdalin is decisively increased by a simultaneous treatment with deshielding enzymes. Gerard has been one of the first authors to recognize the very favorable influence exerted by a continuous treatment with Bromelain in the course of the malignancy.

In fact, the administration of Bromelain is one of the most effective, atoxic cancer therapies in clinical routine practice. We attribute great importance to the atoxicity because it is the prerequisite to a long-term treatment without the specific necessity of clinical controls.

Today, the Bromelain therapy is considered to be essential in cancer therapy. In general, the daily dose ranges from 400 to 1,200 mg. The bigger the tumor mass and the richer it is in mucoids, the lower the initial dose should be. In this connection it is important to know that only certain Bromelains are effective in cancer therapy. They must have glycolytic and proteolytic enzymes. Therefore, purified Bromelain, which have only proteolytic effects are inactive in cancer therapy.

The action of the Bromelains is based on a decomposition of glycoproteins. The membrane of the tumor cell is thus liberated for better antigenic recognition. At the same time, the therapy with Amygdalin is considerably activated, probably owing to an improvement of the substrate absorption.

The therapy should be carried out using Bromelain 200 (Nadrol). In the USA, an identical drug called Ananase 100, is available in pharmacies. One coated tablet of Ananase 100 contains 40 mg. of Bromelain. The intake of Bromelain must take place at the latest 30 minutes before meals or a longer time after a meal. Bromelain should be taken in fractionated doses from early in the morning to late in the evening.

After several weeks or months, an irritation of the intestinal epithelium may occur, especially of the colon epithelium. In such a case, the Bromelain therapy should be interrupted briefly. It is advisable to administer Omniflora capsules, mucilaginous tea or Eugalan milk (Bifidumflora).

To be on the safe side, the liver functions should be controlled from time to time.

As a rule, daily doses of 200 to 400 mg. of Bromelain suffice for a maintenance therapy provided that the clinical picture is stabilized. During Bromelain therapy, gynecologic bleedings have been observed in some cases. These insignificant bleedings can be suppressed by hemostatic agents. The Bromelain therapy leads to an absence of thrombosis. This is another advantage in cancer therapy.

For the dehydration of the tumor cells, the administration of Lithium Orotate (coated tablets) is of great importance. Lithium Orotate displaces sodium from the tumor cells thus decreasing their faculty to retain water. In this way, the size of the tumor is diminished, and its growth is considerably reduced.

Especially with intracerebral malignant processes the application of Lithium Orotate (150-300 mg/day) can be recommended for decreasing intracranial pressure. For this problem Lithium Orotate is about equivalent to Prednisone.

A treatment at the same time with cytotoxic drugs is possible. However, we prefer the application of e.g. 5-FU and/or Vincristine at subtoxic levels (250 mg. of 5-FU once in 10 days or .5 mg of Vincristine per week). In ovarian carcinoma, reduced doses of Leuceran and in Myeloma of Alkeran or Natulan can be taken into account. What we want to achieve is just a slow down effect on tumor cell growth.

We have observed that small doses of .5 mg of Vincristine as a single dose frequently results in an activation of earlier BCG vaccination, which indicates an immune-booster ring effect.

A multiple **toxic** chemotherapy parallel to the Nieper Regimen (e.g. with Cytoxan, Methotrexate, Vincristine, Prednisone) has to be left to the consideration of an experienced oncologist. Cancer chemotherapy in toxic levels is almost always connected with immune-depressive side effects and will always be a device with a short-term perspective, in contrast to the program of the Nieper Regimen, which is outlined here.

In the recent past, South-African and German researchers have found that increasing the zinc level inside the tumor cells may result in an activation of lysosomal enzymes, which can self-digest or at least damage the tumor cell. By means of the new zinc transporting substances Zinc Orotate (Nadrol) and Zinc Asparaginate i.v. injections (Koehler) autodigestive processes in a tumor can be started.

Clinical observations are very impressive. The i.v. application of Zinc Aspartate should be started cautiously, since in larger or pre-radiated tumors vigorous lysozymal chain reactions may develop. These may result in a kind of anaphylactic shock 20-50 hours after the injection of Zinc Aspartate. The treatment should be commenced with a single dose of 30 mg. i.v., wait 3 days, then 60 mg. i.v. Repeat twice a week.

Zinc Orotate (Nadrol) is basically more effective in the activation of lysosomal enzymes inside of a tumor cell since the Zn ion is specifically released at the site of the lysosomes. Nevertheless, its effect on malignant tumors is less than the i.v. application of Zinc Aspartate since the Zinc Orotate can only be applied by mouth due to a very limited solubility in water. Also for Zinc Orotate the therapy should be commenced cautiously, especially in larger or pre-

radiated tumors. For the activation of tumor cell lysozymes Zinc Orotate (Nadrol) is the preparation of choice. To simplify the long time treatment of malignant disease, a combination of Nitriloside (Amygdalin) and Zinc Orotate is offered on the market officially in Germany as B17 Orotate (Nadrol).

This newly developed therapy, which is the activation of lysosomal enzymes by means of cancer cell intruding zinc transporting substances seems to be a potentially most important device for a non-toxic long-time treatment of malignant disease.

A well balanced diet is very important. The consumption of meat from animals receiving hormone injections is forbidden and so is the consumption of shellfish, lobsters and crabs on account of their high nuclein content. The consumption of sugar must be limited. Dishes that zoom up the blood sugar level such as cake, pudding, chocolate, ice cream, etc. must be avoided. Carbohydrates should be supplied in the form of buckwheat, millet, oat meal and other unprocessed wholegrains.

The administration of high doses of Vitamin B12 must be avoided — 40 gamma per day is the maximum dose. The intake of carrot and beet juice is recommended on account of their anthocyanic effect. If the urine becomes red after the consumption of beet juice, gastric acid is lacking and must be replaced.

The use of electrically heated cushions and covers is strictly forbidden since the irradiating alternating current fields may knock off cell membrane charges.

This program can be combined with radiotherapy, surgery and toxic chemotherapy. We have the impression that telecobalt therapy at reduced focal dose will play an important role in the combination with the Nieper Regimen. Moreover, we feel that this program attributes new aspects to various procedures of palliative surgery, which helps to reduce tumor volume and the excess of tumor antigens. We also recommend electro-coagulation of disseminated metastasis since apparent immunological benefit from this procedure has been reported.

Footnote:

Whole blood analysis is performed in Bayer Laboratories, Bopserwaldstrasse 26, 7 Stuttgart, Federal Republic of Germany. Special heparinized vials are mailed from there on request. This is also true for a pamphlet, which explains in detail the evaluation of analytical findings from whole blood.

Some laboratories analyze B-glucoronidase measurements in serum and urine for the evaluation of lysosomal reactions.

TUMOR REGRESSION

THROUGH GLUCOSE-AMYGDALIN INFUSION AND INTRATUMORAL APPLICATION OF

B-GLUCOSIDASE

By
M. von Ardenne and P.G. Reitnauer
Manfred von Ardenne Research Institute
Dresden, Germany

Under appropriate conditions cancer cell suspensions may be hyperacidificated in vitro up to a level of pH 5 (1, 2). In vivo, however, even a highly dosed intravenous drip will often fail to approach or go below a limiting value of pH 6 (3, 4, 5). But experiments on intravenous (i.v.) intensification of tumor hyperacidification of a DS carcinosarcoma in rats (4, 5) by giving glucose, amygdalin and B-glucosidase (5), have clearly shown that, apart from the gain in acidity, there is a distinct retardation of tumor growth.

Test animals were treated with 40% glucose-isotonal solution i.v. until the intratumoral pH value did not fall any further. After that, infusion was continued by giving a 10% admixture of amygdalin which did not result, however, in a further increase of hyperacidification. One hundred minutes after the onset of the combined infusion, the test animals received 10 mg B-glucosidase in 0.1 ml isotonal per 200 g body weight split up in three intratumoral injections. This did cause additional tumor hyperacidification (5). The lowest level of hyperacidification attained was pH=5.73. Infusion was maintained for 4.3 to 6.3 hours and performed at a rate of about 2.5 ml per 200 g per 100 min. Inclusive of pH calibration prior to and after recording, overall test duration per animal was about 8.7 to 12.5 hours. Because of this time expenditure only 6 animals have been treated so far for this purpose.

Fig. 1 gives a comparison of five untreated control animals with six treated animals, and clearly reveals the following action on tumor growth: Two treated tumors remained unaffected, two treated tumors showed complete retardation of growth for 8 and 14 days, respectively, and two treated tumors entirely regressed (60 days observation period). Earlier, but hitherto unpublished experiments with DS carcinosarcoma of rats have shown that, on the average, 150 mg/kg Ifosfamid [1] given in 24 tests with 10 animals, each, caused total tumor regression in 2.5 out of 10 rats (same observation period as above, also seen in male Wistar rats only).

Although these results have been observed in a

[1] *Asta Z 4942, Asta-Werke AG, Brackwede*

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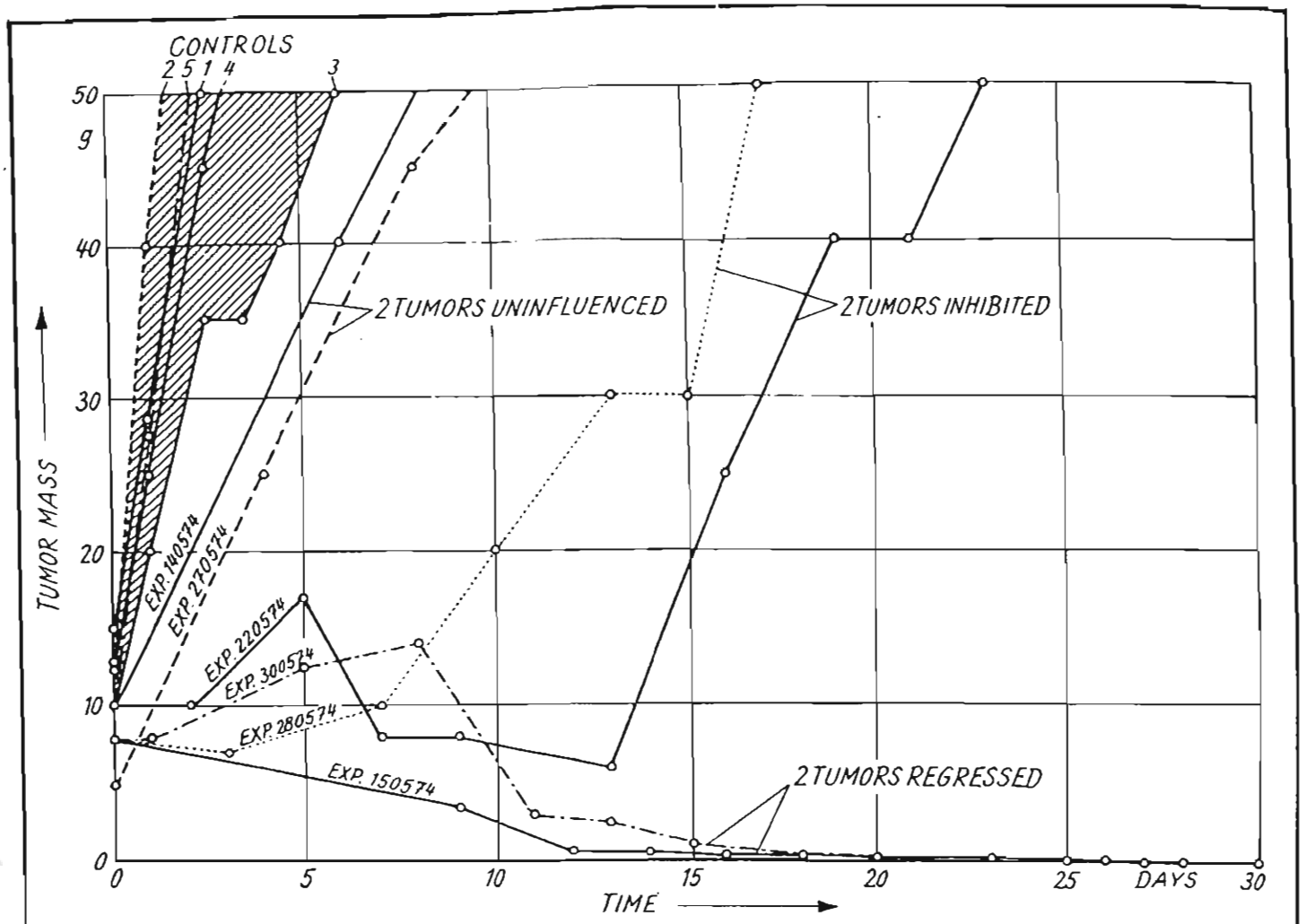

INST. M.v.ARDENNE	THERAPEUTIC EFFECT OF COMBINED GLUCOSE-AMYGDALIN-INFUSION WITH INTRATUMORAL APPLICATION OF β-GLUCOSIDASE ON THE DS-CARCINOSARCOMA OF RAT.	CANCER RESEARCH

few cases only, it is remarkable that intravenous drip of glucose, glucose-amygdalin and intratumoral application of B-glucosidase caused effects that can be compared with those obtained by the most efficient agents used in the therapeutic treatment of DS carcinosarcomas.

This cancerostatic action may be attributed to the lysosomal cytolytic chain reaction (6), various mechanisms discussed in connection with amygdalin (7) and possibly to an additional stimulation of body-own defense evoked in the described process by the formation of rhodanid or application of B-glucosidase.

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