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GENERAL CLINIC

Cytostatic or cytodynamic treatment of cancer By Johanna Budwig

Considering the importance of the problem of treatment of cancer, the German Society for treatment of cancer has recommended to introduce

the new points of view to the expert world for discussion and for examining. Having in mind also the great responsibility towards the coming generations, the president of the German Society for Treatment of Cancer, Professor M a r t i u s, has, in his radio statement on 11/25/1955, underlined that any method that would promise only a slight progress, ought in the first place to be examined by the experts. Whether this method would then be the right one to be used as "auxiliary method" or - in the hands of a physician - would be *the* therapeutic method, ought to be left to be decided in the second place.

The cytological consideration of this problem might evoke resistance just in those readers who are especially close to the above point of view, because they take into consideration the biological meaning of the intercellular substances of the mesenchym in the whole living mass. This here consideration does not want to overlook the extension beyond the cell physiology. Whether the center of attention is the cytological view or the knowledge about the biological meaning of the mesenchym - as is done more frequently in the synopsis of fat-peptidemetabolism in the complete biological literature

since the stimulating works by P i s c h i n g e r (1)-, or whether one would, considering the living mass, rather integrate the aspect of the functional meaning of the ergastoplasma and of the myogene nuclei, is for the moment rather of secondary importance. For ever, the mitosis and the growth of cells which is never independent from the cytoplasma, will be a cardinal symptom of life.

Substantial findings of the here shown perspective were won by the examination of the natural blood (2). As H e n d e r s o n (3), too, concedes, one can correlate the physiological conditions of blood plasma to the physiology of the cell.

Knowing the chemical part crucially responsible for the elementary physiological processes: uptake of oxygen, vesicular breathing, oxygenization of nutrition and proliferation, should then be of importance in physiology and pathology of the cell. Now, if the problem of cancer cannot be parted from the pathological proliferation of the cell, so the consideration of the basic problem of the mitotic division of the cell, in a normal and in a pathological way, will be the basic question in solving the cancer problem. This was expressed by many cancer researchers (4) who again and again recurred to the study of mitosis.

The use of "cytostatic" medications is nowadays the custom in therapy of a tumeric disease. It starts with the conclusion that the "tumor", an exaggerated cell growth in the beginning of the cancer, will destroy the other tissue and at last bring death to the whole organism (5). The task is to examine:

- 1. Is the beginning of the tumor based on an overly cell growth or on an underfunction, an incomplete mitosis?
- 2. What kind of connection is there between the cancerization of cell growth and the lipoid-peptide-complexes in the perinuclear area?
- 3. How do the chemical agents, unsaturated fatty acids and sulfhydryl-peptides, exert their impact on the elementary conditions of life phenomena, on vesicular breathing, expanding force of growth, and functional adjustment?
- 4. Is the indication for the upkeeping of health and tonus (orthostatics) of tissues inhibition of growth or rather fostering growth?
- 5. How is the praxis of cytodynamics recuperated in a way adequate to nature?

Ad 1. Is the beginning of the tumor based on an overly cell growth or on an underfunction, an incomplete mitosis?

The cell as a living unique substance is by right considered the focus of science of life process. There might be different accents and stresses in considering the living mass: But always the cell proliferation and the cell growth will be the main traits of the living substrate. To study this phenomenon will for ever be of importance for judging the major physiological and pathological phenomena. Now: In what way does orderly mitosis differ from pathological cell growth in the sense of a beginning tumor?

Orderly mitosis shows in all the phases, in prophasis, metaphasis, anaphasis and telophasis the significance of dipolarity for the orderly process of a complete nucleus and cell division (radiation of poles and directed movement, see e.g. W. B a r g- m a n n [6]). The energetic process of indirect division is not viable without integrating the electrostatic conditions of the lipoid and peptide parts in the living substrate. Considering orderly mitosis in all the specifics of the division process, it shows that the substance of the lipoids in their functional meaning is strongly contributing to this process in all its phases, last not least in the forming of the nuclear membrane and in the division of the cellular body by genesis of a cell membrane which is known to be rich in lipoids (see graph 1).

Graph 1

Normal cell growth. In (f) in the last phase suturation of the filiar cell by developping a membrane

Golgi-apparatus, too, plays a considerable role in the processes of division. W a r b u r g (7), in his research of the metabolism of tumors, was searching for substances that would foster the development of the suture in sea urchins' eggs. He studied the impact of different fatty acids on suturizing, on the development of the cell membrane. It was quite clear

to Wa r b u r g, even as soon as 1923, that with the development of the cell membrane there would herein be connected an impact on the processes of oxydation. It was an unexpected result to

W a r b u r g that butric acid did not have the expected effect of the desired intensity. The failure of such an important experiment was caused by a little mistake: the choice of butric acid as a representative of lipoid fatty acids was unfortunate. Don't the results of the examinations by T o r s t e n T h u n b e r g (8) and I v a r B a n g (9) point us to the fact that the unsaturatedness of the fatty acid is of a certain importance also in this connection? In the hypothesis of this experiment by W a r b u r g the unsaturated fatty acid ought to have been included in the research. It remains now to be examined whether the latter is of striking impact on orderly mitosis and the course of bio-oxydation. Its unsaturated C=C binding, which causes its richness in electrons and the easy autoxydability, might play a major role in

the process of mitosis, for the di-polarity and for the bio-oxydation. It is the task to examine: whether it is - like the SH-group of the cystein - "a constant essential element of any functioning animal cell" (8)? If now in the mitotic cell division there is not a complete new genesis of the cells, so there will automatically be a mis-ratio of nucleus and plasma. The new plasma developping fails (C a s p e r s s o n [10]). Multi-nuclei will predominate (11). Pluripolar directions and glueing of chromosoms confirm the disturbing of the electronic order in the living substrate (11). Diminishing of the oxydation-processes witness the diminishing ability of functioning of the cell.

C a s p e r s s o n, too, in his studies on the peptide metabolism of the cells in epithelial ulcers found underfunction of cell activity. He states deficiencies in the endo-cellular peptide synthesis, especially the nucleo-proteides which are in the closest connection with nuclear and cellular division.

As soon as 1934, R e i m a n n (12) was able to show in experiments that substances fostering growth, substances increasing the count of division like sulfhydril combination, never cause malignity! (Bold letters by translator) In my opinion there is no cause to attribute the heaping up masses to "an overgrowth". The defective ability of functioning as orderly and complete mitosis ought to be considered more thoroughly in order to clarify the problem. Even the resting epithel represents nothing but the balance between constantly growing cells on one hand, and constantly dying and segregating cells on the other. W a r b u r g (21) l. c. emphasizes on this: "The arrest of growth of living tissue is only seeming, in reality it is a stabile state where growth and dying are in a balance!" Increased growth is always connected to increased vesicular breathing. Decreased breathing is a sign for decreased growth. Epithelium breathes less than embryonal tissue. Epithelium with tumor breathes less than normal resting epithel. Hyperplastic tonsils of children show less breathing than normal tonsils, but considerable glykolysis. The parallel between increasing oxydation and suturization, development of membrane and good balance between young growth and segregation of old cells cannot be overseen. Hyperplasia is a sign of hindered growth where the segregation of the old material is not adequately strong.

Ad 2. What kind of connection is there between the cancerization of cell growth and the lipoid-peptide-complexes in the perinuclear area?

Since the discovering of the nitroprussid-reaction by G o l a (1902) and B u f f a (1904) (13) peptide chemical industry was on the upswing. In 1911 already, I v a r B a n g emphasizes that in the great physiological and pathological problems of the present (1911 l.c.), the lipoids would ask for no less attention than the "too exclusively considered protein bodies". Till our days, the chemistry of proteins is too much in the foreground when studying the physiology of metabolism. Taking a thorough look at the zone important in development of a tumor, it is clear that the perinuclear area, considered important by C a s p e r s s o n - which is so significant for the endocellular synthesis of proteins and development of tumors - that this area is in complete congruency with the deployment of important cell lipoids as well as with the storage of cancerogene noxes such as benzpyren. It is well known that noxes toxic to mitosis will predominantly dock on the surface of the cell

(B a r g m a n n). Even that G r a f f i (14) writes that the storage of cancerogene noxes takes place in the granula, the lipoid-protein-complexes, the "volantine"-granules. The cytological changes observed after the impact of cancerogene noxes

being congruent with the histological findings in tumor diagnostics, must be in connection with the processes concerning the fat and protein metabolism.

Ad 3. How do the chemical agents, unsaturated fatty acids and sulfhydryl-peptides, exert their impact on the elementary conditions of life phenomena, on breathing, expanding force of growth, and functional adjustment?

"The question about the cause of oxygen uptake of the living cell is one of the most elementary questions of physiology, and at the same time one of the darkest." By these words, in 1913, Torsten

T h u n b e r g opened one of his publications on "Examinations on autoxydable substances and autoxydable systems of biological interest". The question was discussed intensely around the fin de siècle. But in the last thirty years it was more and more put into the background (see e.g.

Druckrey l.c.), although its topicality in connection with the cancer problem must not be overlooked. The process leading to the development of a tumor is undoubtedly connected with the central and elementary process of any life: vesicular breathing. The biological importance of the sulfhydryl group in this autoxydable system was stated positive by Torsten Thunberg 1911 and Heffter 1908 (15) and numerous physiologists around the finde siècle. The existence and the knowledge of a second mate in the autoxydable system was considered extraordinarily important. This second mate, the "co-ferment" or "apo-ferment" aroused again and again physiological research in the very center of the chemistry of metabolism: the study of the processes of vesicular breathing and the influence in the sense of triggering breathing. To the Japanese Joshima it appeared important as "Laccatase", as laquering, to de Rey-Pailhade (16) as "Philo-thion" (I love sulphur), to Warburg as "yellow ferment", to E u l e r as function of the "Cytochrom-oxydase" (17) and to Torsten T h u n b e r g (1951) (17) as the "great unknown factor", upon which the whole problem of medicine would nowadays be decided. On the basis of my own research (since 1950) (18) the unsaturated fatty acid was discovered to be *the* functional group, the substance whose missing or being there would be crucially important for the automatic uptake of oxygen. The linol- respectively the linolen acid - makes the matching mate in the autoxydable system of the living substrate, namely in the match with the sulfhydryl group of the protein. Being the electrostatic antipole, this fatty acid is prepared to match and associate with the thioprotein. This symplex is easily influenced and very reagible by yet another influence like more oxygen, or pH-swing, by change of temperature, or impact of light or other rays. The ever reagible, ever prototropic balance seeking, always reversible, always in flux reaction of automatic oxygen intake, is crucially dependent from the synergism of the rich in electrons nucleophile dienfatty acids (linol acids) with the poor in electrons, prone to docking on unsaturated fatty acids, pseudo acids from the protein realm: the sulfhydrilaminoacids. In this location fat and protein metabolism are anchored. The localisation of these substances in the living mass need further thorough studies. Up to now, they were neglected, because good sensitive and particular indicator methods for unsaturated fatty acids were completely missing. New methods deepen our knowledge of things, so the new method of indication of fats (18) by means of paper-chromatography. The newly found substance, the highly unsaturated lipoid in its anchorage on sulfhydrid protein, is essential to the function of the mesenchym, the RAS, to weakness or strength of the connective tissue, it is important to the practical medicine as it is to physiological and anatomic research. By simple methods one can already state: The autoxydability of blood is controllable by adding these substances. If oxygen metabolism is down, blood can be rendered more oxygen-affine by giving these lipoid protein combination. Hemoglobine and the whole blood will take in more oxygen, as can be clearly recognized in the color. Observing blood in the two phase contrast microscope, it is apparent how the tonus of erythrocytes in cancer patients is lowered in comparison to normal blood. The red blood cells lack the otherwise clearly recognizable lipoid covering. Fat globuli are however in the blood. After giving curds and linseed oil as nutrition, the electrostatic

condition in this blood is completely reversed within three to five hours. (Bold letters by translator) The tonus of the erythrocytes has recognizibly improved, the erythrocytes are now layered by a thick lipoid covering. They flock together like dense rolls of coins (19). Also the topography of fat and protein substances in the cell points to their synergism in "protein-synthesis" and bio-oxydation. According to

C a s p e r s s o n the two substances are found in the perinuclear area in the mitochondria and in the boundary layers of cell surface where the most important directing of orderly mitosis is anchored and where - as was proved clearly - the cancerogene noxes like benzpyren dock on, too.

Graph 2

Human tonsil. Mark the cell membran in the outward epithelial zone, with tendency to segregate. Below the connective tissue capsule there is an absolutely different nucleus-plasma-ratio.

Growth processes display the dipolar order. This is kept up by the electrostatics of dienfatty acids and sulfhydril proteins. Disturbing this order and function causes unorderly growth. Disturbing can be caused by noxes disturbing the usual order. But the growth of the orderly mitosis can also be hindered when one of the agents crucial to the dipolar direction is missing and whose substance is a condition to development of nucleus and plasma covering. Not only poisons from the outward are disturbing growth. Lack of a substance that is a foundational element to the genesis, to the functioning of the cell, will also break the growth in an incompleted phase. Hence, loss of substance is a cardinal damage leading to development of tumor, not to cellular overgrowth, but to a piling up of not completely formed living mass, in which the neoplast of a cell did not come to an end, because the substantial composition of the metabolic surroundings did not grant this. Any growth is dependent from the topography and from metabolism (B l e c h s c h m i d). B l e c h-

s c h m i d t (20) emphasizes that generally independent development, without this connection to topology and metabolism, is nonexistent. If this substrate of nutrition lacks unsaturated lipoids which are the constituents of each cell, there would be a basic damage in the cardinal points of growth, namely in mitosis and breathing, with the result of lowered ability of functioning and in incomplete development in cell neoblasts. In the basal membrane - rich in connective tissue - , in the growth zone of the epithelium, there will not be a complete development of a lipoid

membrane and a segregation of the outward layer of epithelium (see graph 2 to 5, B a r g m a n n¹, epithelium of tonsils, vaginal epithelium, and growth zone between dia- and epi-physis). Nutrition of the epithelium is mediated by the blood capillars touching the basal membrane. From this location the development of the lipoid membrane of the epithelial cells is fostered. Lack of the substance that is in itself a part of the development of the membrane

Graph 3

Epithelium from human vagina. The basic membrane forms the border between fully matured epithelial cells with cellular membrane and the underlying living substrate where the plasma-border layer of the cell is not yet recognizable

and the development of new plasma causes necessarily interference of the nucleus-plasma ratio, and hindrance of the development of the cell as an individual one; it is true that heaping up of living mass, rich in nuclei, with incompleted growth, results is an increase of substance,

¹ Printed with permission of the Thieme-Verlag. Graphs from W. B a r g m a n n "Histology and microskopic anatomy of man"., 2nd ed., Georg Thieme Verlag, Stuttgart, 1956

because the segregation of the immature unit of the cell is hindered, nevertheless this state of tumor development cannot be considered as rampant growth, as an overly growth of cells. Fundamentally, it cannot be removed by growth inhibitors.

The piling up of living mass which will forever strive for growth is removed in providing agents that are necessary for full maturation of the cellular individual and for the segregation of the outward zones.

The ability of adjustment is a major feature of the living. Stress and the ability of adaptation are words of our time pointing us to this. The disturbance of the acid-alkaline-balance shows that nowadays' adaptation system is disturbed in its hub. Let us take a short look at the importance of the lipoid-protein association between the SH-group and the diendoublebinding (C=C-): **The carbon-doublebinding of the dienfatty acid** (bold letters by translator) buffers the pseudo acid with the SH-group. **It** creates the prototropy-balance which basically determines the constant preparedness to react, the great ability of adaptation of a living substrate. **It** creates the soluability in lipoids of "lipotropic" watersoluble substances, and **it** explains the way of such important "hidden fats" which has been keeping busy the physiologists of metabolism, since the last century, since

P f l u e g e r (22), V o i t, I v a r B a n g l.c., onto our days. It guarantees the easy autoxydability by its easy inductibility. It sheds a new light on the preconditions of muscle contraction and the oxydative refractory phase (see O. M e y e r h o f f 1923[23]) as well as on the generation of the action potential of the nervous system. Great perspectives are opening up to us by the newly recognized connection between the fat- and protein-metabolism, between linolic acid and the sulfhydril group, by their importance for metabolism, cell growth, and transportation of agents: great perspectives that need further research work on a broader basis.

The formation of secretes is in the closest connection to the *Golgi*-apparatus. Formation of secretes is slackened in patients with a carcinoma.

Graphs 4 and 5:

Longitudinal cut through metatarsal embryonic bones. Graph 4: size of the embryo 61mm, graph 5 size 110 mm. The zone of growth as a border for the individualization and maturation of the cell is visible in the diaphysis. In this zone of growth the tumor will develop in a sarcoma.

Drying of mucosa and hoarse voice are substantial features of a beginning cancerization. Providing the just named life-necessary fats and proteins in the sense of my oil-proteinnutrition (24) causes a triggering of mucous secretion within just a few days, often within a few hours, which can be observed in all the upper and lower cavities including peristalsis. For asthma patients there is fast and profound help possible, also in patients with a carcinoma of the tongue. It should be clear that the improved utilisation of oxygen and energy of tissues, the complete oxydation of fats and of the whole nutrition brings about enormous consequences, but cannot be dealt with here extensively and in particular. Just permit me to share incompletely and like sidelights what can be observed easily. Weightloss will be changed into constant and unequivocally positive weightgain. Lack of appetite will disappear. The feeling of being sick yields to an outspoken joy to recover. The overcritical observers like to interpret this as psychotherapeutic effect. But observations over the years of patients not influenced by psychology show us how fast this not only "subjective" wellbeing takes place. The slack tumor yields within a few days to "good looking". "The not healing ulcer" which K.H. B a u e r rightly names in the indications of a carcinoma, will heal soon. Disturbed menses normalize. The so strongly disturbed defecation will be in order in a few days, without any purgative. This was even observed in the most severe cases of collum-ca, even with the

co-diagnosis of stenosis of the gut. Also the smell of body secretions changes substantially under this diet. Evil smell of the faeces disappears. The balance of water normalizes fast. Retention of urine disappears, edema disappear. The patients with a carcinoma feel better in every way. Freedom of pain without tablets and injections is achieved very quickly. According to this short overview one can state: Symptoms considered by K. H. B a u e r as indication of aggravation of a carcinoma and which I confirm in this interpretation, disappear in a short time. Also, leukopenia and secondary anemia showed a remarkable improvement within four to six weeks. Even the tumor can disappear. (Bold letters by translator) In what time depends on size and location. They want to keep up surgery and irradiation as a must! This follows - to my opinion - autonomically, as "autonomous self regulation". The application of the anti-gender hormones will at any rate function as a cytostatic, i. e. hindering growth and hindering recuperation. They must be avoided. The exstinguished vitality, the great complex of life phenomena that slacken in a patient with a carcinoma, cannot recuperate by substances that hinder the synthesis of proteins and the metabolism of lipoids, and which hinder the growth of the cells that has to come to an end a thousand times in any grown up any day. A preliminary message in short:

In a boy with sarcoma, only by giving the oil-protein-nutrition, the stiff leg was completely movable within three weeks, and after ten weeks also the X-ray pictures showed a substantial improvement. The overall condition of the boy is excellent. (Bold letters by translator)

H e n d e r s o n (3) confirms: The substances recognizable in macroscopic observation are hints to the disturbance in the microcosmos of the cell in pathological developments. Fat substances as well as keratinized sclerotic mass indicate carcinomatous tissue. Highly polymere fats and arachidonic acid were findings in my own chemical examination of fats in carcinoma tumors. They are also found in the blood of patients with carcinoma. Fat and proteins are the substances decidedly pointing to the disturbance in the fat-proteinmetabolism. The disturbance in the synergism betwen linolic acid and mercapoamino acids is probably the main cause for the manyfold ailments of a patient with cancer. Providing the important and life-necessary unsaturated fats, accompanied by their biological mate, the sulfhydril-protein combination, is capable to positively control the life function that is down in a disease with carcinoma.

Ad 4. Is the indication - for the upkeeping of health and tonus (orthostatics) of tissues - inhibition of growth or rather fostering growth?

Substances poisonous to mitosis are given for treatment of tumors and patients with tumors. They paralyse any growth. Healthy growth requires healthy functioning of cells and tissues, requires healthy breathing, good oxydation of nutrition and oxygen, requires new development of plasma protein which is constantly necessary to build young cells. Recovery requires the recuperation of heterogeneity which dominates the micro system and polarity of the complete plasma that is a co-factor for the upkeeping of energy. Recovery requires constant reproduction of immune corpuscules, integrity of the erythropoetic system which must not be allowed to slacken. Stagnation is regression! It is not only on growth that the poisons against mitosis are acting upon, but on any life function, last not least the development of blood- and immune corpuscules. The genesis of secretion does not only apply for the secretion of mucus in the upper and lower cavities. The ability of functioning of eye, ear, sensory organs in general, the dynamics of the whole RAS is dependent from the substances , whose reagibility is paralysed by substances poisonous to mitosis. By supply of the elementary, important fat and protein parts belonging to the generative parts of any cell,

the growth of cells is triggered, but also the normal ability to function. This alone guarantees the normal energy in tissues which is disturbed in a patient with a carcinoma. It secures the ability of autonomous self regulation. Aside from the mentioned healing influence on the symptoms of the overall well being, increased supply of the just mentioned nutrition, the "oil-protein-diet" at first and many times causes an enlargement of the tumor, that can be stated by an X-ray. Even if the tumor evoked a stenosis of the exit of the stomach, or in the peristalsis, the better wellbeing , the better functioning of all life phenomena (even in the location where the tumor is seated) is so striking, that the time until the cancerous tissue has normalized can be waited for in relaxation. (Bold letters by translator)

Not the administering of poisons to mitosis, but supply of substances that are imperative for the growth and the life functions of all cells, will open the road to dealing with the treatment of the tumor problem preventionally and therapeutically.

If in the *development of tumor* there is *underfunctioning of mitosis*, it does not make sense to hinder proliferation of the cell for upkeeping and recuperation of the normal tissue tonus and statics, also electrostatics.

The dynamics arising from the dipolarity and dominating the organisation and dipolarity in proliferation of cells, and any other life functions, is founded on the harmony of the fatprotein-metabolism. The secret of inward peace is founded in breathing, says F e l k e. Undisturbed intake of oxygen is important. Pollutions can disturb this process. Fats which are called "pseudofats" physiologically, can disturb. The very disturbance lies in the lack of the substance that would be imperative for the whole chaine reaction of breathing, deconstruction of nutrition and genesis of new cells. Here an artificial retarding of the substrate striving for growth by applying agents poisonous to mitosis cannot provide the expected help. Help will be provided by supply of substances being a constructive and essential part to the cells

(I v a r B a n g), playing a fundamental role in the ability of reacting of the living substrate. They are the foundational elements of nutrition, the biologically valuable unsaturated fats and sulphur containing proteins.

Ad 5. How is the action of cytodynamics restored in a way adequate to nature?

I have tried to show the comprehensive, physiological meaning of nutrition that can be oxyded and that does not choke oxydation and cell function, in my essay "The elementary function of breathing in its relation to autoxydable nutrition". There, the dish, the foundation for the application of my oil-protein-nutrition is shared (see also p. 611 of this journal). Here we will give only a short survey how to supply with the vital oils and proteins, and how the biggest part of the noxes to the oxydation system can be eliminated from the daily nutrition. Nowadays we can no longer avoid chemical treatment of many foods. However, one can essentially recognize where the cardinal damage lies. Heeding the foundational guidelines of this oil-protein diet will bring about a positive effect, unequivocally and in a short time, in changing the nutritional style.

It is a great danger, if instead of the good and vital fats, "pseudofats" get into the organism. The paralytic effect of hydrocarbons was outlined by

F r a e n k e l (25) as soon as in 1911. Even more intensely doing damage and attacking the vital functions are the highly molecular, partially unsaturated fats, the socalled "poly-oils". They are still used, also in German food industry (canned fish, mayonnaise). Also their use in a solid state as margarine should be rejected, although they are in custom. Hence, aside from recommending vital unsaturated fats, the elimination of pseudofats from nutrition, is urgently

necessary², if one wants to get at the cancer problem at its core. Chemical additives used to preserve food will influence the redoxsystem unfavorably, above all, if they are of the antioxidants. The combination of saturated, with difficulty oxidable fats and antioxidants must be named as especially damaging. In this context, especially fats of butchered animals³, treated in the usual way of preservation, do damage. *Nutriton left in its natural state, as is raw nutriton, is important.*

The booklet "Nutritonal fat, the nerve of nutriton. Right choice and preparation of fats." (26) provides numerous hints to how to tastily prepare the essentially so necessary linseed oil, as well as menues and weekly plans for every season of the year. The linseedoil containing and very tasty sandwich spread "Diaesan" can serve to spice and fatten steamed vegetables. At the beginning of the change in diet and the raised supply with fats, it is important to give linseed, freshly ground or in the form of "Linomel" before each meal, especially in the early morning. Sauerkraut-juice facilitates fat permeation in areas where there was a piling up in the fat metabolism, doing so by its high content in lactic acid. Supply with these foundational elements of "oil-protein-diet" will cause better ability to take the raw diet and the vegetables thought to be not so easy to take, this also in patients with a sensitive stomach. The author will readily provide further information.

Now, what is advisable, recommendable, permitted of further measures? My principle is to answer: Each may do *what s/he can.* Cold water or hyperthermia, homeopathy or phytotherapy, yes, psychotherapy can be indicated, or even surgery. Only avoid what throttles the natural life functions i. e. use of barbiturates or analgetics. The natural rhythm of life processes in waking and sleep, in rest and motion and fresh air is considered important to restore the cytodynamics in a biological way, in combination with the "oil-protein-diet".

In application of the here outlined basic therapy for patients with a carcinoma, one can find that the features significant in papyrographic examination of tumor diseases, disappear completely. (Bold letters by translator)

Cancer research has undertaken quite a few trials in the past hundred years, to interprete and influence the cancer problem. The presently in clinical experts dominating view that cancerization is a merely local phenomenon, has already passed its zenite. The limitations of the presently taken therapeutical measures in orthodox medicine, are obvious. The problem of cancer is no longer a question bothering only the experts in this one field of research.

Would it not be recommendable to go this here shown simple way, on a broad basis? Rapid help for the patient is obvious. Those who chose this way of therapy once, cannot leave it.

If the tumor does not come into existence by rampant proliferation of cells - as was suspected up to now - but by immature, incomplete growth, if the masses in the tumor rather consist in a piling up of living substance which cannot - as would be the process of growth and the law of life - be segregated, one must not use poisons against mitosis for to get rid of the genesis of a tumor. The organism must get the opportunity to build epithelia, plasma and lipoid membrane. Only this way the individualizing and segregation of the outward epithelial elements is rendered possible. **My rejection of the poisons against mitosis is well confirmed by a message from the laboratories of the CIBA company (27). It was proven in their experiments that many feminine and masculine hormones hinder the spontaneous and katalytically triggered autoxidation of linolic acid.** (Bold letters by translator) Experiences have already proven that the application of hormone injections in combination with my nutritional therapy interact very infavorably. If the oil-protein diet has already taken place for considerable time, so an intensive "hormone cure" causes amazingly fast worsening and quick death. So, it does not make sense to combine the poisons against

² The legally founded labelling as "artificial nutritional fat" was suggested to the Nutrition Committee of our Parliament, by me.

³ Forage for cattle often contains inferior fats, nowadays!

mitosis with the oil-protein diet which triggers cytogenesis and segregation of new cells and the complete secretive system.

The practical application of my oil-protein-nutrition

It is essential to balance on one hand between good fat nutrition and protein and on the other between the harmony of hydrocarbs and fat/protein.

We put our stress on the intake of natural foods.

The intake of the necessary fats takes place solely in the form of unheated linseed oil, as curds with linseed oil, unheated Diaesan (with around twentyfive percent linseed oil) as sandwich spread und to fatten vegetables (fat after cooking).

Hard cheese, gervais, camembert and lots of curds are the sources of proteins.

Any fresh fruits or vegetables are allowed. Give the biggest part of it raw, for lunch steamed vegetables and potatoes in their peel.

For sweetening bee honey, dates, figs, grape juices. Sugar is completely eliminated, also the socalled raw sugar, and the socalled grape-sugar = dextrose, Dextropur.

Pasta, noodles are eliminated, same with wheat bread etc.

Give linseed often and copious, as nutrition not as medication. Whole linseed seems to be inadequate, also ground linseed that has already oxided. We chose linseed, ground and immediately immersed in honey, and thus sheltered from oxidation: the socalled "Linomel". This way it is readily taken. Certainly one can take freshly ground linseed. This must be eaten within less than ten minutes.

At the beginning of the oil-protein-nutrition it is necessary for the sick people to have a gradual introduction to this nutrition. For better fat permeation give one bottle of sauerkraut juice (Trademark Eden). According to severity of disease prepare the patient for one or two days with Linomel. If curds-linseed oil are started without preparation, nausea might easily occur. In such a case give two or three tablespoons of linomel, in the morning, noon and evening, to go with milk or unsugered juices, such as motherjuices of trademark Eden or grape juice of trademark Vitaborn. In cases of badly disturbed digestion begin with only linomel and Vitaborn-grapejuice. It is also recommended to give freshly pressed juice of stinging nettle with lemon juice, also radish juice, carrot juice and other vegetable juices. After this preparation our full nutrition is generally well accepted.

The day begins with a glass of sauerkraut juice.

Breakfast: Linomel-muesli.

Two tablespoons of linomel covered with layers of fresh fruits: rasped apple, oranges, strawberries etc. On top of that a layer of curds-oil-mixture (forty percent linseed oil), mixed with milk, sweetened with honey, and laced with chopped almonds, nuts, hazelnuts, wallnuts, cashewnuts, pine kernels, or with cocoa, rosehip-marrow or sea buckthorn-jam. Afterwards we give wholegrain bread (rather spelt than wheat. The translator) with cucumbre, tomato, cheese, radish etc.

At 10.00 h: one glass of fresh juice of stinging nettle with lemon.

At noon:

- 1. A raw food dish: salad, dressed only by linseed oil, we give two or three salads, one green salad and turnip salads (Translator: those that grow beneath the surface), carrots, radishes, turnip cabbage (kohlrabi) partially with a curds-linseed oil-mayonnaise.
- 2. A vegetable, steamed and afterwards fatted by Diaesan, e. g. asparagus and Diaesan, to go with potatoes in their peel, mashed potatoes only in special cases.
- 3. Dessert: Daily, curds with linseed oil as a sweet dish with fruits, e. g. pineapple or as a layer over fruit salad.

In the evening:

Supper should as a rule take place early, around 18.00 h, and should not be sumptuous. We give buckwheat, sorgho, soy flakes or Linomel with milk, sour milk, buttermilk; buckwheat, flakes and sorgho also in a vegetable broth. During the day one can give juices as need be.

It is important to eliminate all dangerous fats, among them, as our newspapers write now, butter; also any preserved foods with preservatives are detrimental. Foods that are only sterilized are not toxic, but less valuable.

Meats and fish are eliminated, especially sausage and canned delikatessen. Confectioner's products are forbidden. A patient with insight will soon unlearn to smoke. A glass of wine is allowed. It is a question of dosis. For the severely sick people, at the beginning of the oil-protein nutrition a little glass of wine is recommended for bridging, if analgetics are weaned out.

Bibliography:

(1)-(28): quotes. See searchword "Budwig" in English section: http://hometown.aol.com/tva12082208/myhomepage/index.html

P. C a s e l l i and H. S c h u m a c h e r confirm my concept with their paper (September 9th, 1955): "*Inibizione della sviluppo del sarcoma di rous nella cornea e nel derma di pollo, a mezzo di proteine basiche*". Also personal messages from Caselli confirm the importance of linolic acid in these lipoproteides.

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ABBREVIATIONS l.c. loco citato (i. e. same source)

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