



ALBICANSAN - Pleomorphism as a Therapeutic Principle for Candida Mycoses

SANUM-Kehlbeck's answer to a widespread disease

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The biological preparation ALBICANSAN by SANUM-Kehlbeck has proved effective against the very widespread mycotic diseases caused by the parasitic yeast organism *Candida albicans* (also known as *thrush fungus*). ALBICANSAN is available in the administration forms of drops 5X, injections 5X, suppositories 3X, ointment 3X and capsules 4X. The therapeutic principle of this preparation is based on a dimorphism of the yeast strain in question. In this context, it is an established fact that often innocent-seeming saprophytes can turn into the agents of life-threatening diseases. True to SANUM-Kehlbeck's conceptual principles, this preparation is not an „anti“ medication, but rather one which non-violently effects transformation processes in the diseased organism.

The yeast organisms of the genus *Candida* have a close physiological relationship with warm-blooded animals - and thus, also to the human species. Of 44 known species, 25 have been isolated in man. *Candida* yeasts are regarded as opportunistic, i.e. as saprophytes, which can only be pathogenic under certain specific conditions. Therefore, their presence on the skin or mucous membranes should not automatically be taken as a sign of a serious disease. A lowering of the host organism's powers of resistance, as for example with cancer, AIDS and metabolic ailments such as diabetes - but also with interventions into the bodily ecology which are con-

sidered harmless, such as taking contraceptives or treatment using antibiotics - enormously potentiates the pathogenic potential of already-present *Candida* cells.

Tests Reveal

Astonishing Virulence

The cytopathic effects of the various *Candida* species can be differentiated with cell-culture tests. Thus, *Candida albicans*, *Candida tropicalis* and *Candida stellatoidea* destroy mouse epithelial cells within 24 hours, while it takes *Candida krusei* and *Candida pseudotropicalis* 48 hours and *Candida parapsilosis* 96 hours. But even varieties regarded as „non-pathogenic“, such as *Candida cacaoi* and *Candida kefyr*, manifest destructive and degenerative effects on mammalian cells in vitro.

The inherent pathogenicity of the genus *Candida* finds its phenotypical expression in the adaptation to growth in mammalian tissue at 37°C. Accordingly, the virulence of the „non-pathogenic“ varieties mentioned here can be sharply potentiated by means of multiple passages through animal tissue (intraperitoneal injection into mice). If, after infection, the free multiplication of the yeast cells is not restricted by immunological and inflammatory reactions of the host organism, then a phenotypical transformation of the yeast cells sets in.

Characteristic

Manifestations of Dimorphism

Candida albicans has various growth forms. In its yeast form, it is present as single cells which

reproduce by means of branching or budding. This growth form is generally classified as yeast within the systematic arrangement of microorganisms. Micro-colonies or pseudo-mycelia are possible variations. The latter arise by means of simple lengthwise growth of the single cells, with multiple branchings. A fundamentally different growth phase makes its appearance with authentic fungiform mycelial growth. Morphologically, this so-called yeast-mycelium transition is characterized by the appearance of germinal tubes and long fungal hyphae with genuine transverse walls.

Both dimorphic growth forms are - aside from biochemical equipment of the cells - primarily differentiated serologically. Pre-existing antibodies to the antigens of the yeast form do not necessarily react to those of the mycelial form (fungal form); the reverse holds as well. Ever since the dimorphism phenomenon of the *Candida* varieties has been known, researchers have attempted to attribute to each growth form a differing significance in the pathogenicity process of the *Candida* mycosis (candidiasis, candidosis, moniliasis, thrush). At first, it was thought that the yeast form was the virulent, parasitic phase, with the fungal form being merely a saprophytic phase. Detailed investigations have since demonstrated that rather the opposite is true.

The Effect of *Candida* Organisms in the Body

In the most widely-spread form of



candidiasis, the superficial colonization of the mucous membranes, *Candida* grows in yeast form. These yeast cells can survive intracellularly in epithelial cells, and can even withstand phagocytosis by granulocytes. In the *in vitro* model, the phagocytized yeast cells form hyphae after only 24 hours at 37°C, which then destroy the granulocyte's cell membrane during their lengthwise growth.

Incubating *Candida* yeast cells together with mammalian cells stimulates the transition to the mycelial phase. This holds also for serum and for aqueous organ extracts (especially kidney and brain).

The test results discussed here, dealing with the cytopathic effect of various *Candida* varieties, reveal that the most virulent varieties (*Candida albicans*, *Candida tropicalis*, and *Candida stellatoidea*) are also the ones that exhibit the most mycelial growth, whereas the less virulent varieties (*Candida krusei*, *Candida pseudotropicalis* and *Candida parapsilosis*) produced led mycelia growth but more pseudomycelial growth.

An antigen-antibody reaction of patient serum with prepared antigens from *Candida albicans* mycelia was found in patients with severe systemic candidiasis, while serum from patients with localized candidiasis, or positive proof of the presence of *Candida* (but without clinical evidence), exhibited no reaction. In the latter cases, there was only a precipitation

with antigen from *Candida albicans* yeast cells.

Using immunofluorescence, it was shown that the serum titer (directed against the yeast cells) of healthy people is relatively high, which means that nothing can be concluded in this manner concerning the presence of an acute *Candida albicans* infection. This correlation manifested itself only with immunofluorescence titers against the germinal tubes of the fungal mycelia.

In the disseminated form of candidiasis, which frequently develops out of an intestinal colonization which is gaining the upper hand, and which can attack any organ, primarily the fungal form of *Candida albicans* is found.

The hypothesis to be made is that the yeast initiates the *Candida* infection (detectable in mucous membrane smears) and causes the host cells to die off by means of intracellular growth. Contact with cell fragments, exudate and transudate stimulates the transition to mycelial growth, which then grows invasively in the tissues. Therefore, the fungal phase is responsible for the spread of tissue lesions in candidiasis.

In summary, one can say that it is not so much the extent to which the yeast and fungal forms of *Candida albicans* differ from each other in their inflammatory, toxic and invasive characteristics, but rather that the appearance of mycelia in bodily fluids and

tissues represents an indication of the extent, age and severity of the *Candida* colonization.

About the Pathology of the *Candida* Yeasts in the Body

Strictly speaking, *Candida* yeasts are not considered "pathogenic", since they cannot trigger an infection in normally healthy people. Some sort of change in the "ecology" of the body must occur before a *Candida* colonization with disease symptoms can make its appearance. However, even minor deviations of the body's physiology, its defensive capability and the internal flora can suffice. The extent of the "terrain" changes determines the severity of the candidiasis cases. *Candida albicans* can be isolated as the agent in 90% of all candidiasis cases.

A particular characteristic of the clinical manifestation of a *Candida albicans* infection is its extraordinary diversity of form. The disease can be anchored cutaneously, mucocutaneously, subcutaneously and systemically; it can range from acute to sub-acute, chronic and episodic stages. Localized, it can attack the mouth, throat, skin, scalp, vagina, fingers, nails, bronchia, lungs and gastrointestinal tract; it can express itself systemically in septicemia, endocarditis and meningitis. The pathological processes range from irritations and inflammations up to acute and chronic suppuration or granulomatosis.

The pleomorphism of the clinical manifestations is comparable only



to that of syphilis. Besides the effects of the active infection, many allergic phenomena are connected with *Candida albicans*. The following listing illustrates the possible clinical situations of a candidiasis:

Infectious diseases

Mucocutaneous involvement

- Oral: thrush, glossitis, stomatitis, cheilitis, perlèche
- Vaginitis, balanitis
- Digestive tract: esophagitis, gastritis, enteritis (chronic irritable bowel syndrome), anal pruritus
- Chronic mucocutaneous candidiasis

Cutaneous involvement

- Intertriginosis and generalized candidiasis
- Paronychia and onychomycosis
- Candida granulomas

Systemic involvement

- Urinary tract
- Endocarditis
- Meningitis
- Septicemia
- Iatrogenic candidemias (with parenteral hyperalimentation)

Allergic diseases

- Candidiases
- Eczemas
- Asthma
- Gastritis

Traditional medicine considers a limited, yet constant *Candida* presence in the digestive tract to be normal. The conclusion from the altered terrain shows that practically everyone lives in a state of slight imbalance. Studies have shown that at least 5% of all

women who are healthy and not pregnant exhibit a vaginal *Candida* colonization; 30% of pregnant women and those who take birth control pills are affected, as are 40% with pruritus and vaginal discharge; 80-90% of pregnant women exhibiting these symptoms are infected.

Even as they come into this world, newborns cannot escape a *Candida albicans* infection, whether from the mother's birth canal, the fingers of the hospital staff or the damp environment of the modern plastic diaper. As is well known, a complex of factors of our internal ecology influences (mostly favors) the spread of *Candida albicans*.

Treating the Various Forms of Candidiasis

Factors such as nutrition, alcohol and tobacco, narcotics, pharmaceuticals (cortisone, contraceptives, antibiotics), physical activity, etc. have complex effects and influences on an existing *Candida albicans* infection.

One of the agents of choice is PEFRAKEHL in its various administration forms. It is prepared from the yeast form of *Candida parapsilosis*, a *Candida* species which can be isolated in man primarily on the skin, in the groove of the nail bed, and from external otitis and endocarditis. The effectiveness of PEFRAKEHL against many superficial *Candida albicans* infections has been demonstrated by its successful and widespread use, and, in the view of traditional medicine, can be attributed to cross-antigens, which

means that antibodies against particular antigens of *Candida parapsilosis* also react to those of *Candida albicans*.

The specific *Candida albicans* preparation ALBICANSAN in particular includes the dimorphism phenomenon of this yeast species in its mode of action. By carefully manipulating the culturing conditions, it was possible to cultivate this microorganism in both the yeast and mycelial forms together, so that in the final product, the saprophytic and the parasitic principles of *Candida albicans* are united.

Therefore, ALBICANSAN represents a product group which is not only effective against *Candida albicans* infections, but which also breaks down the mycelial form with its pronounced pathogenic potential. Because of this, not only the superficial mucous membranal forms of candidiasis, but also the deeply-rooted tissue-infiltrating infections, as well as the strong intestinal mycoses, are more amenable to therapy. Stubborn candidoses can also be treated effectively by alternating PEFRAKEHL and ALBICANSAN in order to achieve a broad-based desensitization.

There are some therapy reports of combination treatment of vaginal mycoses using PEFRAKEHL and FORTAKEHL to quite good effect on patients who had previously been treated with antibiotics. When they relapsed, these patients were treated exclusively with the above-named combi-



nation and subsequently suffered essentially no further relapses.

In order to bring together all the positive-effect therapeutic principles, a suppository preparation was developed based on *Candida albicans*, *Candida parapsilosis* and *Penicillium roquefortii*. This biological medication by SANUM-Kehlbeck is available under the designation of EXMYKEHL 3X.

Results of a Bioelectronic Test on a Preparation

A bioelectronic test of ALBICANSAN yielded the following spectrum of activity: the preparation has primarily a stimulating effect, especially in the joints and sinews, but also on the glands and mental state. It seems to be suitable above all against those chronic diseases which are accompanied by sluggish reactions on the part of the affected organs. First among these is chronic polyarthritis, as well as chronic dry sinusitis and deeply-rooted pyoses. The preparation seems well-suited for pain in the areas of the shoulder joint and the cervical spinal column. It has a restimulating effect on so-called concealed foci.

A positive effect is also found in cases of osteomyelitis and syringe abscesses, along the lines of a provocation of these suppurative foci. Good results have also been noted in the regions of the paranasal and the maxillary sinuses. The preparation has a decidedly stimulating effect on the patient's mental state. It also seems

to be suitable for treatment of certain forms of depression.

From Earlier Data on Areas of Application

In his *Mikroimmuntherapie* (Micro Immune Therapy), Julian mentions as a general area of use for *Candida albicans* preparations, "allergic (psorosycotic) reactions at the level of the skin, the mucous membranes and the organs (digestive and genital)". However, as this preparation is manufactured using alcohol extraction, it cannot directly be compared with ALBICANSAN. This author lists as individual indications:

- Aphthous ulcers
- Gingivitis
- Spasmodic, painful enterocolitis
- Constipation following antibiotic therapy
- Bronchial asthma
- Vulvitis and vulvovaginitis
- Kraurosis
- Intertrigo, eczema lichenificatum, seborrheic dermatitis, unguinal eczema
- Impetigo
- Gastritis
- Dermatoses following antibiotic therapy

Basic Ideas and Summary

Interestingly enough, we have in *Candida albicans* an instance, in which the generational and shape changes of the microorganism were thoroughly researched and recognized by traditional medicine. The change between yeast and fungal form is not the only behavioral character-

istic which ties in with Enderlein's discoveries in Cyclogeny.

In fact, there are even indications that *Candida albicans* is the asexual growth form of a basidiomycete. The main fruiting form or sexual fructification form is said to be a species of the genus *Leucosporidium*, which is systemically related to plant pathogens such as ergot and smut fungi. As yet, the complete generational cycle has, however, not yet been identified for *Candida albicans*, especially as the sexual and asexual fructification forms can exist of themselves, i.e. without a generational change, which tends to suggest to the observer the existence of totally distinct organisms.

Nevertheless, the development of ALBICANSAN once more points out what excellent therapeutic principles result from the use and propagation of professor Enderlein's teachings. At the same time, however, it is also a hint to carry out many further promising developments based on applied polymorphism in the Enderleinian sense.

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