

FIRST RESULTS OBTAINED IN TREATMENT OF ACTINOMYCOSIS BY BEE PRODUCTS AND VEGETAL EXTRACTS

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ROMANIA

Actinomycosis is an infectious, uncontagious, suppurative chronic disease, with a slow and often long evolution. In the etiology of the disease a great importance is attached now to the associations between actinobacteria and other microbes which, under certain conditions, can change the virulence of certain saprophytic microorganisms in the body. *Actinomyces israeli*, a filamentous microaerophilic Gram positive germ, whose usual habitat is man's buccal cavity; *Actinomyces bovis*, an anaerobe which causes the disease in animals; *Nocardia asteroides*, an aerobic germ causing lesions similar to those caused by actinomycosis, etc., are a few agents supposed to cause the disease.

The disease may appear at any age but it is more frequent in 20-50 year old men and 50-64% of cases occur in the cervico-facial area.

At the beginning it may have an acute form, with symptoms of common abscesses, a subacute or chronic form.

The disease becomes chronic when not treated and is characterized by successive inflammatory accesses - new abscesses which open all at a time, the tumefaction gradually extends, the phlegmonous and neoplastic aspect being accompanied by minimum functional troubles, showing no tendency to heal. Even under treatment, its evolution takes a long time - two months to two years (V. POPESCU et al., 1973).

Patient's general condition is subsequently becoming worse. Diagnosis is much more difficult when the lung, digestive tract, or brain are affected.

Numerous therapeutical methods were used in actinomycosis, which generally reflected author's etiopathogenic conception.

The surgical treatment meant to remove the cause and open the abscesses is in principle associated with a local treatment with drugs, or with physical agents and with treatment with general medicines.

Good results were obtained by washing the wounds with a 1% protargol and 0.25% nitrofurazone solution. In the cases with a long evolution, local applications of tincture of iodine, iodine pomades, or iodine ionizations were associated with radiotherapy in doses of 1,200-2,000 R (100-200 R at a time).

General treatment consists especially of antibiotics in large doses and for a long time. Daily doses of 2-3 million units in intramuscular injections to 20 million units in venous perfusion of penicillin were used. Streptomycin, chloromycetin, aureomycin, oleandomycin, tetracycline, etc were also used. Also administered were sulphamides (sulphiren 2 g/day, sulphadiazine 4-6 g/day etc.), iodine sulphanes (pills or intravenous injections), izoniazide (10 mg/kg/day).

Various preparations with iodine are also widely used (starting with dose of 2 g/day, and gradually increasing it up to 8-10 g/day, and then gradually decreasing it).

Experiments were also made with a vaccine prepared of a microbial source isolated from a diseased person, or from several sources, and with lympho-ganglionic extract (TRAUNER, 1931), as they do not produce any lymphatic localization.

Our experience and the literature available on the symptoms and treatment of actinomycosis leads to the following conclusions:

1. 20-60 years old individuals (80 % in our statistics) are especially suffering of this affection which makes them unfit for work often for a long time.
2. Treatment is costly, big quantities of medicines are necessary, which must be administered only in hospital.
3. Though on most cases this treatment gives good results, a very long time (2 years) is necessary sometimes for healing.
4. Drugs administered for a long time can bring about adverse reactions.
5. Most therapeutic methods focus on the causing agent, not taking into account the weak defense response of the organism, which is characteristic of each disease.

Therefore we tried to develop another method of treatment that should associate the antibacterial effect with the increase of the body's own defence capacity, to assure healing in a short time, with no adverse response to the medicine we used.

Material and method

During the experimental treatment we used two kinds of drugs which were obtained by processing two components of vegetal species and by associating them with bee products.

Galenic forms of the drugs were meant for local application and per os administration.

Drug formula and preparation assure a synergism of their main components, such as: vitamins, flavons, enzymes, volatile oils, esters and aromatic acids, and carbonyl compounds. Accompanying matters associate the mentioned components by polar and hydrogen bonds and assure them a chemical protection, an increased permeability, and an intensification of their pharmacodynamic activity.

A strong antibacterial and antimycotic action is produced by esters, aromatic acids and carbonylic compounds, while the active biological substances of the other groups have a cytotoxic effect.

The treatment was applied to 5 patients, 4 men and one woman, between 20 and 49 years old, suffering of cervico-facial actinomycosis, diagnosed after the clinical aspect, its evolution and the results of the microbiological examination (positive for actinomycosis in three cases).

At the beginning, all patients had the symptoms of a chronic apical paradontitis at one of the lower molars.

The respective teeth were extracted and abscesses were drained before the treatment with drugs. In 4 cases, the experimental treatment was applied as soon as it was appreciated that no other therapy was efficient; in the fifth case, it was applied as first and unique therapeutic method.

In order to appreciate the results, we shall present our cases in a few words.

Case no. 1: C.M., a 49 year old male, suffering of actinomycotic osteitis of the right mandibular ascendent branch, retro and subangulomandibular fistulated. During the classical treatment a suppurative mycodermal lesion also appeared on the anterior part of the superior third part of the left shank. The patient was treated as follows in our clinic and in other hospitals: extraction of 47, 48, evacuating punctures, repeated incisions and curettages, therapy with antibiotics in large doses, nonspecific therapy with proteins, vitamin pain removers, intra-venous injections with Endoiodine, intensive local lavages with protargol, nitrofurantoin and lugol solutions, external X-ray therapy, 4000 R each, in 20 treatments.

When examined after nine months of treatment, the patient had no fever, his general condition was slightly changed, he was depressed. A post-operation wound existed in the region of his right retromandibula which secreted a yellow-greyish liquid. He had three fistulous lines leading to the outward and the inside parts of the mandibular branch and to the outwards part of the mandibular body. At the end of these lines the stylet penetrated into deep geodes in the mandibular bone. Tissues and teguments of the area were infiltrated and the bottom of the wound had a proliferous aspect. Right facial nerve paresis and trismus were present. In the 1/3 upper part of the left shank there was a 5 cm diameter ulceration with swelled and thickened edges. The ulceration was covered by a yellowish, slimy secretion and was deep, reaching the bone. Two fistulous lines of about 10 cm, to the upper and lower parts, started from this ulceration. Teguments were cyanotic, infiltrated, thickened.

Since the day of his being hospitalized, the patient has lost 20 kg in weight. Here are the results of laboratory analyses: Hb 11.14 g %, L = 10,500 (N – 90 %, E – 1 %, B – 0 %, L = 5 %, M – 4 %). Sedimentation rate of red corpuscles 1h = 60 mm, 2 h = 90 mm.

As this treatment proved to be of little efficiency for his wounds and his general condition was noted to gradually alter, we applied our experimental treatment.

The drug for external use was applied on the teguments of the affected regions and 3x100 ml solution was administered per os daily.

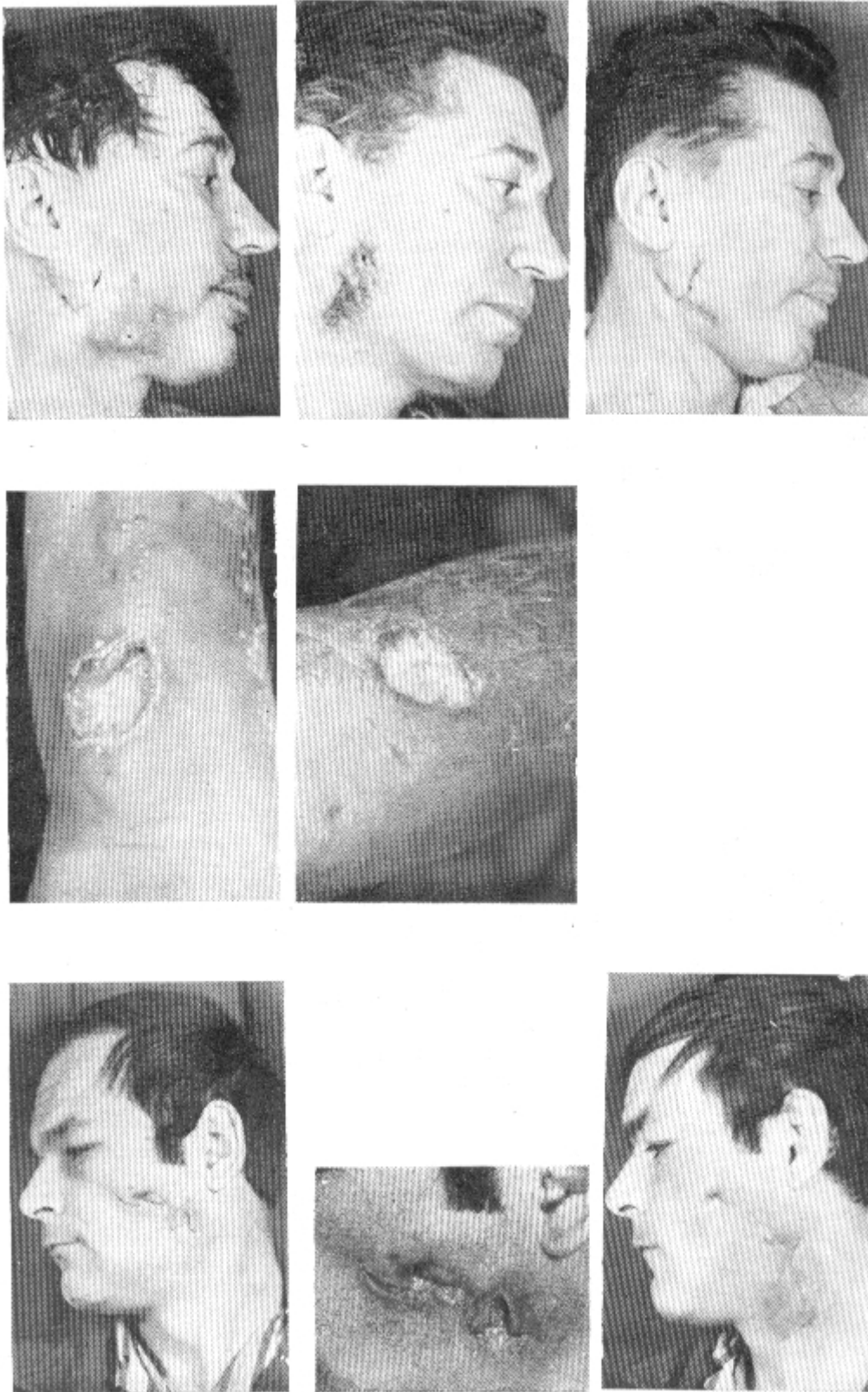
Any other local or general medication was stopped.

From the first days, pains diminished, and the teguments and tissues around the wounds became thinner. At the beginning, the secretion increased and then decreased. Even in the first week the patient put on 1 kg. Outside dressing was changed twice a week.

After 30 days his general condition visibly improved, the fistulous lines closed, the bone covered, the crust became smaller, tissues and teguments thinner, the trismus and facial paresis declined. He put on 4 kg. Results of the laboratory analyses were: Hb – 13.54 g/100 ml, L – 5,300/mm³ (N = 76 %, E = 4 %, B = 0 %, L = 12 %, M = 1%). Sedimentation rate of red corpuscles – 36 mm at 1 h, 66 mm at 2 h. The ulceration in the shank became shallower and smaller, tending to be covered by epithelium.

The patient was sent home and called for control twice a month. At each control a clear improvement of the general and local condition was noted. He recovered in about three months from the beginning of our treatment.

Case no. 2: N.I., a 30 year old man. Diagnosis: malar masseterine and left submandibular fistulous actinomycosis. He had been sick for six months and treated as follows: incision and drainage of the inflammation, extraction of tooth causing the affection, antibiotics, vitamins, local lavages with protargol and nitrofurantoin solutions.



At the top and in the middle: case No. 1, C.E., 49 year old. Below: case No. 2, N.I., 30 year old

As treatment was noted to have no effect on the patient and he ran the risk to have his left orbit invaded (the patient exhibited cecity of his right eye) we applied our experimental treatment.

From the first days of treatment we noted that the evolution of the malar infection to the bottom did no more proceed, and the fistulisation of the suppurative process in the left suborbital area. Soon, the genal

tissues became suppler and the secretion diminished. The submandibular wound healed slower. After 45 days of treatment, genal and submandibular teguments and tissues were supple, the secretion and trismus disappeared, the general condition was very good, the patient had no pains. The patient was sent home and called for periodical control.

Case no. 3: O.A., a 23 year old man, with left low general actinomycosis. He has been sick for 8 months and was treated as follows: puncture of collection, extraction of 37, incision, antibiotics in large doses (tetracyclin, penicillin, streptomycin), local applications with protargol. Nothing no tendency of recovery, we started our experimental treatment.

In 25 days the patient recovered completely.

Case no. 4: G.A., a 20 year old woman, with right genal actinomycosis. She has been suffering of this disease for one month and showed no sign of recovery after incision, extraction of the causing tooth and protargol lavages. Under the experimental treatment the wound healed in about 4-5 weeks. During the last two weeks she went to her office, coming for control and change of dressing twice a week.

Case no. 5: B.M., a 28 year old man, with left submandibular actinomycosis.

He has been sick for 10 days. After extraction of causing tooth and drainage of wound, local and general experimental treatment was applied. In 7 days the patient recovered.

Discussion and conclusions

The therapeutic qualities of bee products have been known for long and they have been empirically used to cure certain diseases from oldest times. Systematic studies have been carried out recently and the results are encouraging.

In the specialized literature we found that good results were obtained in the treatment of infectious processes, especially in the chronic ones, with drugs prepared from bee products, due to their antimicrobial and antimycotic effect and because they stimulate immunization and restoring process. But we found no data on the use of such drugs for actinomycosis treatment.

In addition to certain bee product derivatives the drugs we used in our experiments also contain certain vegetal extracts. Thus the therapeutic effects of each component complete and intensify one another.

Though a small number of cases of actinomycosis were treated with this preparation, the results obtained lead to the following conclusions:

1. Before applying our experimental treatment, in four cases the classical methods were used for a long time (1-9 months) without any result. As soon as the experimental treatment was started we noted a tendency of recovery. In these cases, patients recovered in 1-2 months.

2. In the fifth case the experimental treatment was the first and the only one applied after the cause had been removed and the collection surgically opened. The patient recovered in 7 days.

3. Very good results were noted in a case with invading and proliferous tendency, which justifies our investigations in this direction to be continued.

4. In all cases, the general condition improved considerably, the functional symptoms (pain, trismus) disappeared, and the altered blood constants normalized rapidly.

5. Treatment is easily applicable and may start after collection had been opened without hospitalization.

6. Drugs were well tolerated by the patient and no adverse reactions were noted.

7. All the effects we noted were due to the experimental drugs which were the only ones used during the treatment.