

## APITHERAPY IN PRE- AND POST-SURGERY TREATMENTS\*) (Preliminary report)

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Because of the extensive possibilities of investigation and most of all of the advances in anesthetization and reanimation techniques, surgical practice has extended its field of action, handling affections which previously had been considered as almost unapproachable.

The surgeon is not merely a highly skilled technician any more. He is (and must be) also a clinician with thorough physio-pathological knowledge, conversant with biochemistry, physics, and even genetics.

Unfortunately, he will pay little attention to the pre- and post-surgery diet — for which he will often rely on the anaesthetist who in his turn will pay attention mostly to the parenteral hydro-electrolytic and energetical intakes.

That is why, the post-surgery improvement in the condition of patients with serious affections, provided with an usual diet, is slow, just as recovery of weight and physical strength, their convalescence lasting for a longer time.

It is known that for a patient having undergone a surgical operation, the best medicine is a nourishing and rational diet — consisting mainly of glucides and proteins, under a readily assimilable form.

In the period of post-surgery catabolism, the denutrition of the patient due to his chronic affection will continue, the patient consuming his protide and glycogen stores in the very moment when he needs them most badly for cicatrization and for maintaining the function of his liver. On the other hand, most patients with serious affections of the digestive tract will lose their appetite. Anorexia is due to the lack of secretion by the glands of the digestive tract and by the annex glandular organs (salivary glands, liver, pancreas).

At present, it is well known that the mucous membrane of the digestive tract desquamates fast, just as the mucous membrane of the cells of glands secreting various pro-enzymes and enzymes, that desquamation is more marked in patients with anorexia, and that for re-making these glands the organism needs to be supplied with proteins including all amino-acids, especially the essential ones.

Also, the affected organism must be supplied with the necessary amount of carbohydrates used for its daily needs of energy (minimum 1200—1500 calories), which are usually supplied by intra-venous perfusion of glucose salts.

But parenteral administration must not be prolonged too much; it is not always rationally made use of, sometimes either causing adverse reactions or being poorly tolerated by patients; in addition, it has only an indirect effect on the digestive secretion on the intestinal peristaltis. Therefore, is it recommended to start per os feeding as early as possible, being known that the mucous membrane of the digestive tract is the most selective filter for the food requirements of the organisms.

\*) Paper delivered at the Symposium "Bee Products, Their Processing Technologies", Bucharest 1976.

Bee products (honey, pollen, beebread, royal jelly), when added to a proper diet, are ideal for the pre- and post-surgery periods, as in a small volume they contain a great amount of all elements needed by the organism: glucides which after passing through the filter of the digestive tract reach the blood circuit — with no energy consumption, being thus available for the cell metabolism or for re-making the glycogen stores in liver, or the stores of essential amino-acids, mineral salts, as well as of all vitamins — the most important being the B complex and Folicine (folic acid).

Moreover, bee products — and above all pollen — contain enzymes: amylase, catalase, diastase, invertase, phosphatase, lipase, etc. — of which the digestive tract is short during the post-surgery period; these bee products induce again their secretion by the digestive glands, and consequently the patient's appetite, and resuming of peristalsis.

As is but natural, when the usual diet is supplied concomitantly with such products, the former will be assimilated more easily and the results will be better.

C. HRISTEA and M. IALOMIȚEANU state, in their paper "*Bees' Products to the Benefit of Man's Health*", that "Pollen has a high content of essential aminoacids, as it includes about 5 times more isoleucine, leucine, methionine, treonine and lysine, and more than six times more phenylalanine and triptophane than beef, and three times more than cheese" and that "whether other sources of aminoacids did not exist, an average amount of 15 g of pollen alone could provide for the minimum daily needs".

Other noted researchers too — A. CAILLAS, R. CHAUVIN, S. MLADENOV, ASK, UPMARK, G. JOHANSEN, (quoted in the same paper) have pointed out the remarkable effects of pollen in deficiencies caused by lack of nitrogen substances.

The following clinical experiment is a telling example of the effect of bee products when administered in serious affections.

The female patient E.S. 73 years old, left the internal affections section of a hospital in June 1976, with the diagnosis of primitive neoplasm of liver — nodular form, with marked anorexia, asthenia, and an advanced stage of denutrition. 15 g pollen, 40 g of honey with 3% propolis in it, and 3 little spoons of Energin "L" were administered daily. In several days she had a good appetite again, and in 4 weeks she gained 4.200 kg in weight, although no obvious improvement of the liver occurred; the liver continued to be large, embossed and hard.

Because of the well-known nutritive qualities and of their biostimulating effects, we have also administered them — eclectically and in usual doses, to 17 patients with more serious affections of the digestive tract and of the biliary paths, after surgical operation.

In 7 of them, suffering of duodenal ulcer, partial gastrectomy was made, in two — with malignant tumour on the colon, right hemicolectomy and left segment colectomy were made, and in 9 suffering of calculous cholecystitis — anterograde subserous cholecystomy.

Only for 7 of the patients, enough time was available to supply pollen and honey mixed with royal jelly in the pre-surgery period.

The post-surgery treatment was applied 48 hours after surgical operation, concomitantly with the usual medication and diet.

The treatment consisted of two little spoons of polyflora pollen

mixed with 2 spoons of honey and 10% royal-jelly, administered in the morning and in the evening. To those who tolerated well this dose, after 4—5 days, also 3 little spoons of Energin-L were administered, for 25—30 days. In the future we wish to also include beebread in the treatment, as it seems to have a greater nutritive value than pollen.

Of our short experience, the following conclusions may be drawn :

For the pre-surgical period : after a treatment of 4—7 days, the appetite is good again, increase in weight is recorded ; in patients with neuro-vegetative troubles, with insomnia and excited the neuro-psychical balance is restored, which makes them more resistant to the surgical operation.

For the post-surgical period : the appetite appears again but sooner, and concomitantly with it also the intestinal passage (likely to be due both to the resuming of the secretion of the digestive glands and to the laxative effect of honey).

Undoubtedly, the results in terms of increase in weight, recovery of the physical strength and of the work capacity are better than in patients to whom bee products have not been administered.

Of course, this communication would have been more illustrative if comparative tables had been shown, including patients suffering from the same affection, some of whom were supplied the usual diet and medication, the other being also supplied bee products ; the tables should have also included biological characteristics, evolution of weight, and incidence of death.

Following the above preliminary paper — to be continued by a more extensive one including results of more clinical investigations, we conclude :

1) In the pre- and post-surgery treatment, bee products must be used, administered per os either as food or medical preparations.

2) The importance of the use of bee products is due to the substantial amount of easily assimilable energy released by them, to the substantial amount of protides — primarily of essential aminoacids, to all vitamins, and the numerous enzymes and catalysts of biochemical processes.

3) We have administered bee products especially in more serious affections of the digestive tract and accessory glands requiring surgical operations ; following such a treatment, the resistance of patients has increased, they had good appetite again and intestinal passage — soon after the surgical operation, gained weight and recovered physical strength fast, and the period of convalescence was shorter.

#### LITERATURE

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