

APITHERAPY AND APIPREVENTION — PROSPECT APPROACH IN MODERN BEEKEEPING *)

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Natura abhorret vacuum

The deeply humanistic and universally humane idea of the need to protect and promote the natural environment — on which the modern society lays such a special stress, is not new.

The question arises whether the man of the present world has grasped and fully understood all the potential threats of the pollution and degradation of the environment, or he only instinctively has a presentiment of these dangers? One may say that now man is already considerably affected by doubt about and fear for the advantages of the developments of the chemical and pharmaceutical industries. Undecided whether he would choose one or another of these products, and scared by the possible consequences of the "chemicalized life", man is instinctively ready to accept, with much confidence, the pure gifts of mother Nature, primarily for preserving his own health, for protecting himself from the unwholesome factors of the environment at present.

A "vacuum", a gap incompatible with nature has appeared due to the tremendous development of the chemical industry, which must be filled up with "natural" products, whose quality and purity must be guaranteed by certificates. This fully justified trend of using natural products has been manifest in many countries. Hive products and preparations with such products are sought after by an ever greater number of people, who first of all expect the medical preparations with natural products to permanently protect them from the noxious factors of the present day "unnatural nature". The prospect approach in the utilization of hive products must be also based on their protective value.

This also means a completely new outlook with respect to what the actual protective value of the natural products means, above all of the hive products to which Hippocrates referred in recommending our nutrient substances to be cures and our cures to be nutritive.

One must bear in mind that the earliest essential relationship in the history between living beings and environment was precisely determined by the chemical constituents of the food. During the feeding process, the food is turned from an external factor into an endogenous and biologically active factor.

*) Paper delivered at the 3rd APIMONDIA-sponsored International Apitherapy Symposium. Portorož, 1978; excerpts

In my opinion, Hippocrates' deep going reflection has been truly understood and acquired full significance only in our times.

The principle of "balanced diet" has been scientifically supported. It is based on the knowledge of the genetically determined enzyme spectrum inside the body, spectrum with which are compatible only the food constituents (and of course of the medical preparations) for which proper metabolic systems have developed in the process of evolution.

Of all hive products, honey meets to the best the requirements mentioned above, which justifies the utilization of this food in a balanced diet. Promotion of honey as a daily constituent of a rational diet must be scientifically and ecologically grounded, and in full agreement with the new relationship between man and nature — the actual environment conditions. In this respect we point out the valuable effects — anti-toxic, anti-anaemic, invigorating, and sedative — of honey, which justifies its current use for preventing and reducing the effects of want of oxygen in the body of the sedentary, exhausted, and stressed man nowadays.

It is the same error again and again : we use therapeutical means only when pains appear, never in order to prevent them. The same is true with utilization of bee products. Considering only the effects mentioned above, they would be sufficient for us to become aware of the fact that, of the hive products, honey is the most widely used in preventing various affections. The various combinations of honey and plant curative principles, produced in many countries (USSR, Romania, Yugoslavia and others), attest to the curative and prophylactic value of the natural products.

The fast development and successful practice of apitherapy (we recall that 3 international Symposia were held in 4 years only) could be — because of the commercial reason — a danger in the future, whether it is not actually based on utilization of the natural properties of the hive products for preventing diseases and for protecting the polluted environment. This approach will open to beekeeping the unexpected prospect of an important part to be played by it in the protection of the environment.

Setting out, insistently, only the therapeutical value of hive products could entail a decline in interest in these products. Apiprevention is not a technical term coined by analogy with the medical terms, but the outcome of a requirement which came forth concomitantly with the very concept of apitherapy. The scope of apiprevention is greater because there are much more healthy people who are certain of the curative value of the hive products than diseased people who will immediately resort to apitherapy for treatment. I therefore think that time has come for all people to understand that apitherapy and apiprevention are inseparable parts of a unique conception of utilization of hive products to the benefit of man's health.

At the last 2 Symposia on apitherapy (the 2nd and 3rd) a number of facts were brought to the fore, which enable us to envisage the future development of the utilization of bee products :

1. Up to now interest has been evinced in and sustained activity carried out for the use of bee products to the benefit of man's health in 20 countries, most of them European ;

2. In general, there is no correlation between the level of development of beekeeping in a country and the degree of interest in utilization of bee products in medicine (e.g. Australia, USA, Mexico, etc.) ;

3. At the last two Symposia, most papers dwelt on propolis, and the others on preparations with various hive products. A decline has been noted in the interest in royal jelly and pollen, while the interest in honey and bee venom has been increasing substantially ;

4. While at the 2nd Symposium applied research predominated (63% as compared to 31% fundamental research), at this Symposium (Poriwroz, 1976) the situation has changed — 46% as compared to 54%.

Utilization of bee products to the benefit of man's health might be affected by a number of unfavourable factors, such as :

1. Insufficient fundamental research in this domain, and in other domains too ;

2. Lack of quality standard requirements for bee products; this makes new findings difficult to be ascertained, or even hampers them, because the new findings must be checked on the basis of the knowledge having resulted from previous research ;

3. Lack of specific methods for objective determination of the actual biological value of the bee products, primarily of those with complex molecular structure ; this considerably limits the introduction of these products in the pharmaceutical industry and consequently also their utilization in medicine ;

4. Insufficient investments in fundamental research which, if paid proper attention, could promote utilization of bee products.

In spite of all these drawbacks, new prospects lie ahead for the use of bee products in medicine. The stress being laid at present on investigation of propolis suggests that it will be widely used in medicine in the future. The research findings concerning propolis and its fractions have revealed a number of essential advantages over most of antibiotics. I point out in this respect the well-known antibiotic and anti-cancer effect of some polyphenolic components originating from plants — which are also present in propolis.

It is but normal that this paper does not cover all aspects for whose elucidation thorough study is necessary : further investigations must be made of the biological value of bee products.

Conclusion

The successful development of apitherapy up to now calls for new approaches. Promotion of the utilization of bee products for preventing diseases, in close relation to the environment conditions, opens up new prospects for the value of these products and beekeeping in general to assert themselves. In my opinion, it is now the time for a Standing Commission of APIMONDIA to be created, to be concerned with the problem of utilization in medicine of the products elaborated for us by the most useful insect — *Apis mellifica*.