

THE BIBLE OF BEE VENOM THERAPY

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CURATIVE EFFECTS OF BEE VENOM

Arthritic and Rheumatoid Conditions: Their Relationship to Bee Venom

And now for the bee venom therapy! My highly respected and esteemed reader, I fully comprehend your thoughts. You expect me to say that all the enumerated difficulties which a well-educated and intelligent physician cannot overcome without the assistance of a whole army of specialists, our poor, insignificant little friend, the bee, will do all by herself! Far from it — sorry to disappoint you, but I can tell you right now that she will do surprisingly more for you than you expect.

What is to be taken away, you must do yourself. Search for and remove all exogenous (*action or object coming from outside a system*) and endogenous (*arising from within*) contributory causes and she will do the rest. Rather odd, isn't it?

I have too much regard and consideration for you to anticipate that you will just take my word and will use this little-known, unaccepted, and almost unheard-of remedial agent without obtaining a proper explanation. It would be rather an effrontery or insult on my part, which is the least of my intentions. I am firmly convinced that you would never expose your patients to such risk and danger.

Before I give an explanation of what contributes to the production of these unique curative effects of bee venom, for your satisfaction I just mention the fact that the remedy has been used by hundreds of physicians all over Europe, in well-known clinics and hospitals of highest repute, in thousands of cases, and *not a single instance has been reported where it has done any harm or produced injurious effects*. The administration of this remedial agent must commence with a minimum amount and the divided doses must be increased gradually, both with respect to the number of injections and the concentration of the solution.

The curative value of bee venom is due mainly to its hemorrhagic and *neurotoxic* properties — especially to the former.

The *hemorrhagic effect* of bee venom is not only a powerful action on the blood itself, stimulating the circulation, but also on the blood vessels. This is the best explanation and interpretation of its efficiency. *Bee venom accelerates and intensifies the circulation, and dilates the capillary vessels*. It has a distinct endotheliolytic action, to such an extent that *it opens the capillary walls, enabling the blood cells to transmigrate into the tissues*. This will result in an increased metabolism and, on account of the greater supply of oxygen, in an adequate oxidation, additional heat supply, improved elimination of accumulated waste, and destruction of bacterial growth—in other words, bee venom will produce exactly the effects which are required to correct the existing harmful pathological conditions and to restore the disturbed normal physiological state.

Necropsies of animals, after severe bee venom intoxications, show abundant blood effusions in all cavities of the organisms and hemorrhages of the mucous and serous surfaces, hepatic and peritoneal bleeding. Very often a leakage of blood can be found outside of the capillaries which form hemorrhagic areas in the

tissues. The strong effect of the venom on menstruation, which we will describe later, is due to this property.

The physiological effects of bee venom can be best compared with those of histamine, which produces a noticeable dilatation and relaxation of the arterioles and capillaries, increased circulatory speed of the blood stream, lowering the arterial and increasing the venous pressure. After a hypodermic injection of histamine, even to the naked eye the dilated capillaries on the face and finger nails are plainly visible. In the whole body, it produces a sensation which is comparable to the "hot" climacteric flushes. Ruhmann thought that urticaria of the skin is due to the effect of histamine.

Pogany proved that histamine, administered intravenously in experimental animals:

1. Dilated the arterioles and capillaries, and increased the capillary pressure, which influenced the venous pressure.
2. Caused contraction of the veins.
3. By contracting the veins of the lungs, produced stagnation in the right heart.

Pogany found, also, that the syndrome was similar to that of Basedow's disease, and both conditions exhibited great sensitivity to adrenalin.

Deutsch, likewise, found that histamine has a distinct vasodilator effect on the small vessels, at the same time provoking a reflex central irritation. He thought that, so far, histamine excels all known remedies in the treatment of arthritis and rheumatism. Injected into the painful muscles, it has remarkable alleviating power, which is not due to any direct anesthetic effect, but can be attributed only to vasodilator action. In exposure to cold, especially in inactive states, there will be a lack of histamine in the cells of the organism, which, when replaced, will relieve spasm and pain. The usual empiric, symptomatic treatments of arthritis and rheumatism with physiotherapeutical measures (massage, spas, local irritants), mechanical, thermic, electric, and actinic treatments, have only one purpose-to increase circulatory speed, produce hyperemia and histamine. The circulatory speed of the rheumatic and arthritic is, as a rule, diminished and histamine produces a derivative action.

Harmer and Harris used 1:1000 histamine-acid-phosphate in normal saline solution, in their injections for clinical experiments. The most striking effect was the dilatation of the minute blood vessels of the skin, associated with an increased rate of blood flow. Reddening of the skin, and the raising of its temperature were the manifested phenomena; the increase of the limb volume was ascribed to the same cause. Subcutaneous veins assumed an increased tone. Blood pressure, both systolic and diastolic, fell slightly. Transudation of fluid from blood vessels into tissue space definitely increased, attributed to the intensified permeability of the vessel walls. Pulse rate was augmented by about twenty beats a minute. The respiration rate was usually not affected. Injected intravenously, the effects were complete in about three to four minutes. These effects occurred even in doses 500 times smaller than those used in animal experiments.

If we carefully observe the physiological effects of histamine, we cannot fail to notice their great similarity, almost identity, to those produced by bee venom, which would explain the action, utility, and efficacy of the venom in the management and treatment of arthritic and rheumatoid conditions.

The neurotoxic effects are like those of many other venoms of the same type. Arndt-Schulz's great homeopathic theories were that 1, diseased organs are more sensitive to drugs than healthy ones; and that, 2, small doses of poison are stimulants while large doses paralyze. Both points are not only plausible but very true and are especially applicable to our subject.

We often find that toxic substances, if given in carefully graduated doses, produce a sedative effect upon the nerve centers and act as a physical and mental tonic. Many poisonous drugs have beneficial effects. The same can be said of bee venom. *The hemorrhagin, an important component of bee venom, will dilate the capillaries and make them permeable to blood. The neurotoxic action is similar, since by paralysis it releases the capillary constriction of the nerve endings of the sympathetic nervous system.* It produces an intrarachidian anesthesia, paralyzing the peripheral terminals of the sensory nerves. In addition, it has a powerful tonic effect.

Whether there is a specific action as in the case of foreign protein therapy, as some authors believe, is irrelevant — the main consideration is efficiency. Pemberton remarked that the nervous system is importantly concerned in arthritis. Sharp anxiety and emotional strain often produce surprising, temporary benefits. We cannot exclude the conjecture that the psychic influence, which is supposed to accompany the nonspecific protein injections, may also constitute a part of the reactive mechanism when the injections with bee venom are given.

(C. Flandin, of France, and his associates recently achieved remarkable results in the treatment of arthritics with Chinese acupuncture. This age-old procedure was employed in China and Japan for thousands of years and consisted of driving gold or silver needles into the tissues with a mallet or by twisting. If the involvements were more extensive, they used many needles, leaving them in place for hours, even days. This method was revived many times during past centuries; Dr. Louis Berlioz, father of the musical composer, was one of those who used it with great success, not only in arthritic and rheumatoid conditions, but for many nervous afflictions, like hiccups, asthma, hemiplegia, contractures, etc.

The French author's success was so striking that they were convinced it could not be attributed solely to local counterirritation but to some reflex action of the sympathetic nervous system,. They applied only superficial punctures of rather short duration, stressing the importance of precise topography, which is yet undefined.)

The parenteral application of foreign substances has a specific omniscellular effect, possibly on the endocrines or on other glands, bone marrow, spleen, etc., and, also, on the pyrogenic center, promoting oxidation. Their ability to arouse universal protoplasm activity accounts for the invigorating and tonic effects which they produce and, also, for their indirect influence on certain local pathological disturbances which, perchance, may exist.

Keiter, for many years collaborator of Terc, who administered bee venom in thousands of cases, frequently stated that when anemic people were treated with it he often noticed remarkable improvement in their condition. It apparently had the same effect as intravenous injections of iron and arsenic. Keiter, also, noticed that if the treatments were given to women, even between menstrual periods, they showed temporary menorrhoea. In pregnancy, this sometimes led to abortion. It is possible, as already mentioned,

that some fatal cases of bee stings reported in older persons, after only one sting, were due to cerebral hemorrhage.

Whether there is any special selective affinity of bee venom to the sugar content of the blood and joints is yet to be proved. So far, to my knowledge, nobody has considered the question but I strongly suspect that bee venom may have some physico-chemical effect on the glucose of the organism, possibly even as a catalyzer. I wish I could experimentally support this statement but to my regret I cannot, and, therefore, I have to leave this, another fertile field, for the physicist and biochemist.

R. T. Woodyatt said: "In the body, a special glucolytic enzyme (alkali carrier or intensifier) destroys the glucose selectively. All sugar must become glucose before it is destroyed. Alkali administration may also increase glucose utilization. It might be conceived that the cells contain molecules of a glycolytic catalyst or enzyme. As fast as glucose molecules enter the cell, they come into collision with the catalyst molecules, perhaps combining with them, and as a result of the encounter the glucose molecules would be dissociated into unsaturated fragments or ions. From the moment of union or dissociation they would cease to behave as glucose molecules." (A fermentative splitting is required before sugar can be oxidized, which Woodyatt appropriately called "dissociation.")

According to Cohnheim's theory the muscles form a glycolytic enzyme for which the pancreas supplies an essential activator. Allen suggested that the pancreas supplies an amboceptor, which is necessary for a proper colloidal sugar combination. Landsteiner thought that chemical changes alone may be sufficient to account for specificity, but another question is still open, whether physical properties play any part in determining specificity, like electric charges, ionization of an amphoteric electrolyte. Professor Rosenbach, of Berlin, suggested that the biologist should not be satisfied to describe just the stable symptoms. A functional diagnosis is important. Kinetic factors, dynamic conditions, the consideration of harmonious synergy are essential. May we apply this to the effect of bee venom? As Hopkins stated, dynamics of living matter must always remain beyond the reach of chemical studies — since at the moment when chemical methods are applied the materials ceased to be alive.

Does the effect represent the transmitted, concentrated, dynamic energy of the sun? Meyerhof thought the difficult question of what purposes the chemical exchange of energy serves cannot yet be completely answered. The study of some measured exchanges of energy has led to the fundamental problem of cell energetics, namely, the storage of the sun's energy in green plants. The greatest part of radiant energy can be changed into chemical work under proper conditions. Possibly, some time, we shall succeed in explaining the utilization of oxidation energy in the chemical metabolism of cells.

The new cosmogonic theory of nuclear physics is building an intellectual "bridge," linking the material and nonmaterial... and "something" with no dimensions may assume a three-dimensional existence... and electro-magnetism can be converted into matter in the form of pairs of electrons and positrons... Why could not the action, also, be reversed and matter be converted into radiation? According to Einstein, the modern interpreter of the major mysteries of physics, *substance* and *energy* are the same and theoretically one can be converted into the other.

No doubt, we have made tremendous progress and advancement in the knowledge of the physical and chemical nature of matter, but we are yet in utter darkness with respect to some occult power and its laws, which harmoniously control, regulate and coordinate the vital functions. All phenomena cannot be

explained by physics and chemistry. There are some other basic, yet-to-be-discovered, extra, or better call them, supreme vital forces to be considered. We are more than physico-chemical automata. The study and interpretation of vital forces still remain "open" — so far defying all known analytical methods.

Recent biological studies link plants and animals more closely. Porphyrin, the base of red blood-cells, is also the base of chlorophyll, the green coloring matter of plants. Chlorophyll is derived from the energy of the sun. The only difference in these two substances is that porphyrin of the blood is combined with iron, while the porphyrin of green plants contains magnesium.

C. B. Coulter, of Columbia University, extracted cytochrome, a pink pigment found in all living creatures which use oxygen. This fact establishes a powerful relationship between the chlorophyll-green plants and red-blooded animal life.

We know the marvelous effect of bee venom on honey. Honey will keep for centuries without fermenting and fouling, due not only to its high sugar concentration, but also to the action of the venom which it contains only in a very minute quantity. Possibly, beekeepers who are saturated with bee venom have no lowered sugar tolerance, no delayed sugar elimination, but sufficient potential capacity to utilize sugar. This may be one of the reasons why they do not suffer from rheumatic ailments.

Bees feed only on the purest pollen of flowers. They convert or distil from this substance, in their mysterious alchemic laboratory, the venom. And what is pollen? The endocrines of the plants and trees.

Terc, more practical and rational than scientific, used bee venom for over 40 years, successfully treating thousands of cases, but never approached the subject for a theoretical explanation. He was interested only in therapy and clinical results, reminding me of an excellent cook who uses the fire for his art but is not interested in its chemistry.

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