

New Approach in Treatment of Cancer & Viral Infection by Apis Mellifera L Venom Extracts (Honeybees Venom)

Samia Ahmed Kamal^{1,*}

¹Department of Virology, ARC, Egypt

Corresponding author:

Samia Ahmed Kamal, Department of Virology; ARC, Egypt

Keywords:

Honeybees, mellitin, Bee venom, anticancer therapy, antivirals, cationic peptides, allergy management

Received: Jan 21, 2022

Accepted: Feb 02, 2022

Published: Feb 06, 2022

Editor:

Fatma Taher, Department of Electronic and Computer Engineering, Khalifa University, Abu Dhabi

Abstract

Cancer cells need strong drug to be eliminated. Cancer lesions cure could achieve by topical application of crude bee venom. Bee venom medication used to prevent malignancies in groups most at risk (predisposing factors). Bee venom crosses the blood brain barriers because its components are very small. However, Bee venom contraindicated administered by intravenous injection because it's hemolytic substance, mellitin which is powerful anticoagulant. However, the cationic peptides mellitin govern the mode of ac-

tion of bee venom as anticancer and antiviral in vivo; [1] there is a negative charge on cancer cells, viral infected cells, diseased cells, and generally any cells that contain toxins or damage, and viruses are carrying negative charge even when it is outside the living body. [2]Bee venom component (melittin) carries a positive charge, it destruct negatively charged cancer cells. [3] The role that the herpes virus is likely to play in increasing the severity of cancerous diseases, worsen the conditions: herpes viruses are opportunistic viruses that strike the body whose immunity is weakened for any reason. Therefore, the role of herpes virus must be neutralized when you planning to treat a cancer patient. Fortunately, bee venom is a powerful antiviral, and thus we hit three birds with one stone, that is, we kill cancer cells, kill opportunistic viruses, and improve tissue immunity to participate in the fight against cancer and get rid of toxic exudates more efficiently.

Background

Cancer cells need strong drug to be eliminated. When these cells multiply, they do not adhere to the type of tissue originated from, but are able to attack blood vessels and various tissues and secrete toxins capable of weakening immunity and stopping the immune system from doing its role. Also, the substances resulting from the proliferation of

cancer cannot be eliminated by the body due to the defect that occurred in the microcirculation.

Skin cancer can be treated with safe local treatment by whole bee venom, especially that cancer located near or in vital organs such as the eyes, nose, ear, face and head. The cancer of the organs located under the skin also can be dealt with in the same way. The only problem in this regard is the lack of experience or education for these new methods that require practical experience and expertise. It is not just an effective drug against cancer, but a sub-specialty that must be studied because it will change the course of dealing with patients and completely different from what is known.¹

Each patient is a unique case, and the doctor must know all its details, so he cannot generalize. For example, bee venom concentration varies from stage to stage and varies from site of injection to another, and the reaction of people to the drug depends on unique factors as well.

Example: the patient's age, general health status, degree of cancer, disease size and spread, extent and location, each factor must be taken into consideration. As for bee venom, the doctor is the only person who will deal with it. The doctor must verify the source of bee venom and that it is not adulterated. He must also make sure of its concentration and even prepare it himself. The doctor must know the safe doses for each person individually according to his general health condition, and he must realize the degree of sensitivity of each person to this drug.²

The doctor who will use this drug must do some scientific laboratory experiments on the culture cells that were extracted from the tumors and on experimental animals before starting to use it for treatment, i.e. he must be an expert in this drug. A doctor, who knows the capabilities of this drug, will be able to use it and be creative in treating patients in all circumstances. If the surgeon is able to fully understand the secrets of this medicine, he will be creative during the treatment of internal tumors and during his surgery as well. For

example, bee venom can stop the transmission of tumors to neighboring tissues and prevent its spread (injecting bee venom during surgery). Bee venom can be applied to prevent tumors in groups most at risk of potential cancer (predisposing factors). Like smokers, elderly, as well as brain and nervous system tumors. This drug can reach the brain and all parts of the body through the blood. Whatever the way the drug is administered, it reaches various organs of the body. But, for example, may not be injected into the vein at all. But if taken by adding it to food, it helps prevent clots. The secrets of this drug are very huge and its applications are many, all of which are important.³

Honey Bees' Venom (Honey Bees Stings Extract) Innate Mode Of Action

1. For example: Breast cancer: you can inject the drug inside the tumor, through the skin, the cancer cells died immediately, but the normal cells will not be affected or die, that because this drug works selectively and functionally, it is not a mechanical destruction of tissues,
2. Examples: lesions of Lyme disease: (bacterium *Borrelia burgdorferi*), bee venom treats the lesions itself, curing the effects of bacteria on tissues, enhance immune system to deal with the microbes, moreover kills the bacterium by another techniques. All these functions are highly complicated processes,
3. Example: in vitro experiments; bee venom dissolves the cancer cell lines; however in vivo; it only kills cancer cells and enhances the vitality of normal cells. Why? The answer is the negative charge on abnormal cells inside the living organism. The viruses infected cells, the cancer cells, the cells contain parasites or bacteria, all these abnormal cells have a charge on them, so that the drug targeted them and functionally removed them away from the normal tissue.
4. Moreover, bee venom components are very small in size, but have certain types of genetic materials, i.e. have a mind and a mission.

Materials & Methods

Bee venom must be prepared immediately before use to avoid oxidation. Then packaged in tubes containing a single dose and kept at minus 20 °C.

Preparation of Bee Venom Solution for Injection

1 g + 3 liters distilled water

Filtration Process

1. Dissolve the medicine in a small amount of water, such as 20 ml of distilled water
2. Then we prepare a special filter for the syringe; the size of the pores in the filter is 0.2 microns.
3. We withdraw the solution with a syringe and then carry out the filtration process.
4. Then pour the filtrate into the rest of the water.

Bee Venom Extraction from the Honeybee's Stings

1. Electric set designed to collect bees stings operated by beekeepers at their apiaries
2. Wait until the evaporation of liquid and volatile substances off the product, then collect bee venom when a crystalline material appears that tends to be white or light yellow. Such extract would lose a large amount of the liquid components of the stinging bag, as a result of drying; allergic reactions are lesser effects for bee venom than the bee's stings as the experts in this field say that volatiles components contain the largest percentage of allergens.
3. This dry extract is the crude bee venom (whole bee venom).

Bee Venom Allergy Examination

Some people are allergic to bee stings, and some people are allergic to penicillin, and this does not mean that we should not use it in treatment.

Therefore, before use, one must do the Allergy Test: the Test as Follow

Withdraw a small amount of the solution that we will use in the treatment, about 0.2 ml, and then inject it

S/C in skin of the arm; then wait for one hour: If the injection site showed severe effects of the injection, similar to burning with hot water with itching in the eyes and body, then this person has a natural allergy to the drug.⁴

How do we Treat Allergies if it Appears during Treatment?

1. Inject the patient with Avil intramuscularly (I/M)
2. Allergy symptoms will go away immediately

Bee Venom Possibilities to Use In People Who are Allergic but Need it

Yes, under rigorous supervision, but with a modification in the route of administration, in this case allergic patient will receive treatment through food and avoiding parenteral route of bee venom injections. Especially in treatment of cancer and chronic viral infections, wherever, other treatments are not effective or unavailable, or expensive, etc.⁵

How to prepare the medicine through food and drink

1. Add 0.5 gram whole (crude) Bee Venom / kilogram of natural bee honey: the doses are determined according to each case, ingestion route
2. Add one gram / three liters of clean drinking water: the doses are determined according to each case; ingestion route

This method is suitable for all people in general & in order to improve immunity and prevent diseases

- To treat diseases caused by various viruses
- Treat Lyme disease
- Patients who receive local injections of the same drug
- Smokers and other groups at risk of developing cancer as a result of genetic or acquired factors
- Other uses; arthritis, chronic inflammations, etc.

So that; doctor must be familiar with the properties of bee venom in order to be creative and benefit from the tremendous therapeutic capabilities of bee venom.

Bee Venom is Consumed in the Presence of Diseases Bio Agents in Vivo

It means that if bee venom injected into cancer lesions or lesions of viral infections (for example; herpes virus or pox virus) the bee venom will be used up during the process of eliminating cancerous cells or viral infected cells; bee venom will kill the causative agent and destruct the infected cells.

It also means that if bee venom injected into healthy skin or tissue, it will not be completely consumed, which means that the determination of doses depends on the condition of the recipient of bee venom treatment, and the doses of bee venom must be adjusted according to this fact, taking into consideration that patient must be under medical observation and adjust our doses according to what we notice with naked eye.

Therefore, the doctor must receive adequate laboratory and experimental training before using this method, or it is urgent they can perform it under the supervision of the experts in this drug (the duty of the clinical pharmacist).⁶

Cationic Peptides (Mellitin) ^{+ve} Role in Mechanism of Action of Bee Venom as Anticancer and Antiviral in Vivo

There is a negative charge on cancer cells, viral infected cells, diseased cells, and generally any cells that contain toxins or damage, and viruses are carrying negative charge even when it is outside the living body.

In the components of bee venom, there is a substance melittin, which carries a positive charge, so the mode of action of bee venom in the treatment of cancer is similar to cationic peptides effects, that is, bee venom break down and attack negatively charged cancer cells. However, healthy tissue does not carry electric charges.

The role that the herpes virus is likely to play in increasing the severity of cancerous diseases, worsen the conditions.

Why do we assume this: because our observation in examining samples by electron microscope shows the presence of different types of herpes virus in tissues that

suffer from diseases caused by other major causal factors.

Also, herpes viruses are opportunistic viruses that strike the body whose immunity is weakened for any reason. Therefore, the role of this virus must be neutralized when you planning to treat a cancer patient.

Fortunately, bee venom is a powerful antiviral, and thus we hit three birds with one stone, that is, we kill cancer cells, kill opportunistic viruses, and improve tissue immunity to participate in the fight against cancer and get rid of toxic exudates more efficiently.

Important Notes (Vital):

1. You must rely on the newly produced, fresh prepared, whole bee venom.
2. You must rely on bee venom free from human intervention and do not separate its components from each other, because the components of bee venom cooperate with each other in synergistic actions to cause the pharmacological effect of the drug.
3. It is forbidden to smell bee venom
4. It is forbidden to rub the eye while the hand or the tool has the residue of the bee venom
5. the face mask should be placed on the nose and the eyes should be covered with transparent glasses while dealing with bee venom
6. Always have (Avil) syringe ready for use in case of any allergic symptoms

References

1. Samia Ahmed Kamal et al (2015). Experimental studies on whole bee venom inactivated Rift Valley fever vaccine candidate in vitro. Egypt. J. Chem. Environ. Health 2015, 1 (1):274-290.
2. Samia Ahmed Kamal (2016). In Vitro Study on the Effect of Bee Venom on Some Cell Lines and Lumpy Skin Disease Virus. Journal of Agricultural Science and Technology A 6 (2016) 124-135. doi: 10.17265/2161-6256/2016.02.006
3. Samia Ahmed Kamal (2018). A New Discovery on How

Bee Venom Components Treat Viruses, An Innovative Study on Camel Pox. *SF Virol Res J* 2:1.

4. Kamal SA (2019). Comparative studies on lumpy skin disease virus in human. *Med Clin Arch*, 2019 doi: 10.15761/MCA.1000161
5. Samia Ahmed Kamal (2020). Non-Surgical Removal of Basal Cell Carcinoma by *Apis Mellifera* L Venom. *Journal of Skin Cancer Epidemiology* - 1(1): 1-15.
6. Kleinschmidt JH, Mahaney JE, Thomas DD, Marsh D. Interaction of bee venom melittin with zwitterionic and negatively charged phospholipid bilayers: a spin-label electron spin resonance study. *Biophys J* 1997; 72:767-78.