Could it be possible that the Anti-vector brigades, in charge of controlling Aedes aegypti *mosquito infestation levels play a role in reducing the rate of amputations caused by diabetic foot ulcers in Cuba?*

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Quite recently a group of the staff at the Center for Genetic Engineering and Biotechnology (CIGB abreviation of Centro de Ingeniería Genética y Biotecnología), I included, agreed on responding to a call from our political and trade union organizations to support the Cuban Ministry of Health campaign to control mosquito infestation levels in our capital city [1]. This call was due to the need to diminish *Aedes aegypti* infestation in several Havana municipalities.

Among the CIGB employees, willing to support the mosquito fight crusade, there were some people engaged in the campaign for extending the use of Heberprot-P, which is a unique Cuban biotech drug able to heal wounds in diabetic foot ulcers (DFU), as part of a national program. The desicion to spend time in controlling mosquitoes for a limited period of time meant that we have to follow up our Heberprot P duties at extra hours.

Once at the polyclinic, located on 25 st. between 54 ave. and 56 ave., in Buena Vista district, we were assigned to work on what is known *in situ* vector control, which means moving to a block and visiting people house by house, mainly searching for mosquito larvae.The results of each inspection were reported in writing on Model 9109, after each visit (a written evidence from the Ministry of Health to record all visits performed by health workers involved in each anti-vector brigade to each house).

Once in the inspection area, the CIGB´s brigade was divided into small teams of two people. Both my partner and I were involved in CIGB Heberprot-P project, so during the inspection we used to talk and discuss about our specific work regarding the extention of Heberprot-P DFU specialized services with this drug in Cuba. In this respect we are not certain whether it was because Heberprot-P topics were so deep in our minds, the fact is that after visiting the third house in the first block, my partner and I felt the need to ask the inhabitants the following questions:

• Are there any diabetic patients living in this house?

• Do any of your relatives suffer from diabetes?

• Have you heard of a Cuban drug called Heberprot-P, effective in healing DFU?

• Do you know where in the city the health center units in charge of treating DFU with Heberprot-P are located?

It is important to highlight that in more than 300 houses, almost everybody acknowledged the information given and many of them thought that delivering it in printing would be even more effective.

During those days, we gave additional information about the treatment of DFU with Heberprot-P in all houses in each block assigned including where to go in case of any complications. For this reason we want to share the following proposal:

That the Cuban Ministry of Health analyzes the possibility of joinning the health promoter of each zone of the municipality health department with the Cuban Anti-Vector brigades (more than 30 000 employees) incharge of fighting mosquito infection throughout the country [2] to help this ministry to diminish the number of amputations in the Cuban population, by delivering printed information on Heberprot-P, house by house, including the units that offer Heberprot-P for the treatment of DFU and where they are located. If the above proposal is implemented, the only aditional task to be performed by each brigade will be delivering a printed document that explains what Heberprot-P is intended for.

Upon acceptance, a previous coordination with the Ministry of Health will be needed to have:

1. A printed document to be shared either printed or in electronic format with information about: diabetes, diabetic foot ulcers and its associated risk for amputation, a summary about what Heberprot-P and its therapeutic action, also including a map with all the 93 units that currently use Heberprot-P for the treatment of DFU.

2. The distribution of updated information about DFU might be centralized by the health promoter of each polyclinic. This person will be in charge of giving the documents to the anti-vector staff in order to distribute them house by house, once the inspection for vectors ends.

Considering that the delivery of the printed material will be performed without any further information, the cost of the program will be very flexible and cheap.

Potential advantages

1. This proposal launched for analysis fits the instructions given by the Cuban national authorities to avoid extra expences in each governmental entity.

2. The proposal will allow a new working attitude to potentiate the knowledge about Heberprot-P in the Cuban population, a product registered in Cuba in the year 2006 and included in the Basic Drug Frame of Cuba in the year 2007, with more than 93 centers in all provinces and that today are not receiving the expected amount of patients.

Professor José Fernández Montequín, eminent Cuban Angiologist and pioneer in extending the use

1. Ochoa O, Esperanza. 1998. Modelajes de vigilancia y lucha antivectorial en Cuba. Dirección Nacional de Estadísticas, Unidad Nacional Vigilancia y de Lucha Antivectorial.

2. Noriega V, Ramos I, Couterejuzón L, Martín L, Mirabal M, Díaz G. Situación organizacional de los grupos de control de vectores en Ciudad de La Habana. Rev Cub Salud Púb 35(2). Disponible en: http://www.scielosp.org/pdf/rcsp/v35n2/spu18209.pdf (Consultado, julio 23 de 2010).

of Heberprot-P in Cuba as well as in other countries, has stated that this drug changed paradigms regarding treatments for DFU handling [3].

Nowadays promoting the knowledge about Heberprot-P is one of the most important goals, not only among medical personnel but also among diabetic patients, their relatives and the whole population. No one better qualified than the anti-mosquito vector brigades to help us to face this challenge.

Novel contributions in medicine as it was the introduction of anesthesia in surgery (the use of ether as anesthesia was first described in 1846 [4] but it took 50 years extending it use [5, 6]) and the use of antibiotics (Alexander Flemming discovered penicillin in 1928 [7], but its use was not broaden until 1944) took many years spreading their use.

Lets imagine what would happen if each of the more than 30 000 workers involved in the fight against mosquito vectors, linked to the Deputy Direction of Epidemiology and Hygiene of our Ministry of Health, qualified and authorized to visit each Cuban family in their specific working sectors, delivers a dossier with information about DFU in each house visited, how to trait it and where to go for free of charge treatments with Heberprot-P.

More than 1000 amputations caused by DFU per year in Cuba show that there is still a lot of work to be done in this matter.

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7. Fleming A. The antibacterial action of culture of a *Penicillium*, with special reference to their use in the isolation of *B. influenzae*. Brit J Exp Pathol 1929;10:226-36.

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Received in August, 2010. Accepted for publication in September, 2010.