19 - INAPTED BODIES: THE SOCIAL IMPACTS OF THE EPIDEMICS OF MALARIA, DENGUE, CHIKUNGUNYA AND ZIKA IN BRAZIL.

Renato da Silva
UNIGRANRIO – Duque de Caxias, RJ
redslv333@gmail.com

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Introduction

In the late 1930s, two major malaria epidemics in the Brazilian northeast, in Fortaleza and Natal, worried the government and also the US that had intended to establish military bases in the region because of the advent of the Second World Cup. An agreement between Getúlio Vargas, then president of Brazil, and the Americans allowed joint actions to address malaria in the region. Malaria with its fevers made men unfit to work and in the belligerent period also to war. Malaria hit some regions planet that was scenario of the conflict. Northern Italy stage of countless battles was also on the tutelage of malaria. The experience in the Brazilian northeast produced a tradition of malaria control and control created in Brazil, with the eradication of the Anopheles gambiae vector in 1942 as the historical landmark. Even with the successful eradication of the Anopheles gambiae vector, malaria was endemic in large part of the national territory, also presenting malaria epidemics in the country. The situation changes drastically from the end of the Second Great World, with the massive use of dichlorodiphenyl trichloroethane (DDT). It was decades of confrontation of malaria throughout the national territory until the isolation of the disease in the north region affecting in part the development of the region.

From 1980 we will see the epidemics of dengue in the large metropolitan centers. In the summer season, the mosquito Aedes aegypti multiplies reaching an increasing number of people, away from professional activities and some cases leading to deaths. The growth of the epidemics of dengue brought new types of the disease more and more serious reaching bodies of all age groups, gender and also social class. A typically interdependent disease that needs to be thought of collectively. However, it was in the 21st century that we experienced bitter new epidemics caused by Aedes, which transmitted different viruses, but left more serious marks on the bodies. The discovery chikungunya in Brazil in 2014, brought more fear to the population. The strong symptoms of the disease severely compromising physical motor functions, leaving bodies unfit for longer brings to light a negative reality. The disease can lead to fatal and permanent complications. In 2015, the Zika virus appears in the country, seen initially as a milder dengue version, quickly loses that naive impression when babies begin to be born in maternities in the Brazilian northeast with cranial anomalies. Microcephaly becomes the most cruel face of the zika epidemic that explodes in the middle of the first decade of the twenty-first century. In this sense, we will analyze the production of unfit bodies caused by the social impacts of the malaria, dengue, chikungunya and zika epidemics in Brazil.

Unfit for malaria

The first identification of the Anopheles gambiae mosquito in Brazilian territory occurred by the entomologist Raymond Shannon of the National Yellow Fever Service in 1930 in the state of Rio Grande do Norte. The first outbreak of malaria occurred in 1930, in Natal, reaching ten thousand people in a locality of 12 thousand inhabitants. In 1938, the Brazilian Northeast suffered the largest malaria epidemic on the American continents. The states of Rio Grande do Norte and Ceará were the scene of this epidemic that left a tragic mark. In the first, 5 thousand deaths in a population of 240 thousand inhabitants. In the Jaguaribe Valley, in Ceará, in July, 63,000 cases were recorded, of which 8,000 were deaths. In some localities, the impact on the population reached a surprising 90% fatality rate (BENCHIMOL, 1996, p.169).

The mosquito Anopheles gambiae was eradicated in 1942. This fact would have marked the history of malaria in the country and opened a perspective of eradication of the disease in the world via eradication of a vector. This experience was a first step in the constitution of organizations and a group of specialists (mariologists) in the control of malaria in Brazil. The National Malaria Service (NMS) was created by Decree-Law No. 3,171 in 1941, annexing the Malaria Service of the Baixada Fluminense. Until 1942, the Northeastern Malaria Service remained linked to the Rockefeller Foundation and was later incorporated into SNM (GADELHA et al., 1977).

DDT, an insecticide in the chlorinated hydrocarbon group, was presented by scientists as the most effective weapon against malaria after the end of World War II. The use of DDT in households has become an immediate success in many countries. However, the insecticide had a greater impact in countries where sanitary conditions were more developed, ie in countries or regions where there were no alternative ecological niches for mosquitoes to develop the chain of transmission. In many areas of the world malaria was eradicated, and positive results led international public health authorities to believe that disease eradication was possible (CUETO, 2007).

The year 1947 marked the beginning of large-scale use of the insecticide in Brazil (Hochman, From autonomy to partial alignment ...). The first major campaign took place in the state of Rio de Janeiro and included 1821 locations in 30 municipalities. The campaign, which covered virtually all states from north to south, also reaching the federal capital, served as a model of action to combat malaria in the rest of the country, an unheard-of health action in South America. DDT was considered by many specialists in malaria, a revolutionary weapon in the fight against disease. It had qualities that had not been presented in any other antimalarial drug: high toxicity to malaria mosquitoes, low toxicity to the applicator, prolonged action with satisfactory chemical stability and low cost (PAULINI, 1962).

Mario Pinotti, director of SNM, observed two distinct factors, results of action to combat malaria after five years of DDT use. First, in areas where the insecticide was used on a large scale with rigor, the reduction of malaria reached zero cases, and no cases of the disease were registered for another three years in those regions. A second unplanned but possible factor would be the resistance that mosquitoes could acquire with the long-term use of that weapon. That is, during a certain time of DDT use without effective and conscious planning, the insecticide would lose its effectiveness against the vectors. Mario Pinotti was responsible for creating the malaria control method in areas where the use of DDT was not feasible. In this case, the method involved the combination of an antimalarial to a food or condiment of daily consumption. The so-called "Pinotti Method" used cooking salt mixed with chloroquine, an antimalarial, and was widely used in the Amazon region. In the beginning, the method

was thought to be used as a control, but it was also considered as an aid in the perspective of malaria eradication. The expected result was the disappearance of sources of infection in the population that used the chloroquine salt. The transmission would be interrupted in the period of three to four years, thus depleting the parasites in the carriers (SILVA; HOCHMAN, 2011).

During this period, malaria experts initiated a campaign to promote the transformation of control programs into eradication programs in the 1950s. Studies on vector resistance to DDT would be the focus of the XIV Pan American Sanitary Conference in 1954. Santiago, Chile, and the VIII World Health Assembly in 1955, held in Mexico. These international health meetings resulted in proposals and recommendations to member countries for the conversion of control programs into eradication programs. The insecticide should be the main weapon of this endeavor, however, the area of malaria in the world would be enormous and in heterogeneous regions (Packard, 1997). In the case of Brazil, these heterogeneous regions would present themselves as a great obstacle not only to the eradication program, but also to the control program. In 1955, the then presidential candidate of Brazil, Juscelino Kubitschek presents a public health program, where he draws attention to the damage that malaria causes because of the temporary incapacitation of those infected. They stop working for several periods during the year because of the illness (PUBLIC HEALTH PROGRAM OF CANDIDATE JUSCELINO KUBITSCHEK, 1955).

The Global Malaria Eradication Campaign was unsuccessful. Malaria has not been eradicated in the world, only a few countries have been successful. The causes and motives that made up this "failure" are not fully known. One of the possible causes for the lack of interest in eradication by richer countries is that they have solved their malaria-related problems. These nations were the main funders of the global campaign (SILVA and PAIVA, 2015).

According to the Ministry of Health in 2011, 99.7% of transmission cases are concentrated in the states of Pará, Amazonas, Rondônia, Acre, Amapá and Roraima. In 2016, according to data from Fiocruz, 129,185 cases were registered in the country. The concentration of the disease remains in the Amazon region, reaching the states of Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Rondônia, Roraima and Tocantins. However, the southern and southeastern regions are not fully saved from the anopheles.

In 2017, the number reached 174,522, a figure that represents an increase of 48%. The most affected state is the Amazon, with about 74 thousand cases in 2017, followed by Pará and Acre. The epidemiological update was made by the Pan American Health Organization (PAHO). After a period of decline (6 years), malaria is on the rise not only in Brazil but also in the world. In the local sphere the increase of the epidemics of dengue, zika and chikungunya in the urban space diminishes attention the predominant malaria in the rural zone. Decrease in control actions at the municipal, state and federal levels has boosted the increase in malaria cases in the Brazil.

New epidemics, new unfit bodies

The first reference to dengue in Brazil dates back to 1846. At the beginning of the twentieth century in the decade of the twenties there were records of dengue epidemics in São Paulo and Niteroi, but without laboratory confirmation. Because of the intense fight against the vector of yellow fever Aedes aegypti that could also be the vector of dengue, in 1955 the last mosquito breeding sites were eliminated. Three years later the public health authorities declare vector eradication. However, in the late 1960s, the mosquito reappears in Brazilian territory. In 1973, the mosquito was again considered to be eradicated, which does not occur in fact, since reinfestations occur in Rio de Janeiro and Rio Grande do Norte, but no cases of dengue are recorded. In the 1980s, dengue fever became a reemerging disease and became the first epidemic of dengue in Boa Vista in 81 and five years later reaching the State of Rio de Janeiro and rapidly reaching the Northeast Region (BRAGA, SAN MARTIN, 2015, p.63).

In this context, dengue became endemic in Brazil, with increasingly frequent episodes of epidemics, with the appearance of new types and variations of the disease. Between 1986 and 1990, dengue epidemics affected some states in the Southeast (Rio de Janeiro, São Paulo and Minas Gerais) and Northeast (Pernambuco, Alagoas, Ceará and Bahia). In 1990, a new serotype of the disease appears. Dengue 2 aggravates the situation in the State of Rio de Janeiro (BRAGA, VALE, 2007). In the passage from the XX century to the XXI, other types of dengue are emerging (Dengue type 3- year 2000, Dengue type 4- year 2010). Dengue has been constantly present in our social reality for more than 30 years, each summer bringing panic to the population mainly in the Southeast and Northeast region of Brazil. During this period, some epidemics left more than temporarily unfit bodies, unfortunately we had some alarming rates of death.

The first case of chikungunya was recorded in Tanzania in 1950. In the year 2014, 824 cases of Chikungunya were recorded in Brazil. Outbreaks of chikungunya in the southeast region occur from 2015. It becomes epidemic in the Brazilian northeast in the middle of 2016. With 60,000 confirmed cases of chikungunya in Ceará, which has the highest index in the country (AGÊNCIA BRASIL, 2017). The chikungunya in its most acute phase compromises the joints promoting severe pains and sequelae that can last up to six months. There are suspicions that chikungunya virus as well as zika virus may lead the individual to develop another pathology known as Guillain Barré syndrome, autoimmune disease. Bodies unfit for a longer period, may be rendered incapable definitely.

The Zika virus is a mosquito-borne flavivirus and was first identified in monkeys in Uganda in 1947 through a network that monitored yellow fever. It was later identified in humans in 1952 in Uganda and the United Republic of Tanzania. There have been outbreaks of zika in Africa, the Americas, Asia and the Pacific. Between the 1960s and the 1980s, human infections were found on the African and Asian continents, usually accompanied by mild disease. The first major outbreak of the disease caused by zika infection was reported on the island of Yap (Federated States of Micronesia) in 2007. On November 11, 2015, the Ministry of Health acknowledged the first epidemic of the Zika virus in Brazil. A new disease in the country that haunted and haunted pregnant women due to complications of the virus that can cause microcephaly in newborns (MCNEIL, 2016; DINIZ, 2016). In this sense, the unfit bodies produced by the Zika virus will be permanent. A sad reality, which has an impact on social development.

Final considerations

The epidemics produced by so-called neglected diseases impact on the social development of the country. The population is hostage from time to time to discontinuous policies and lack of planning. The epidemics of malaria, dengue, chikungunya and zika that have as main transmitters mosquitoes are interdependent diseases. That is, the confrontation of each one goes through collective actions and educational programs. Neglected diseases and their overwhelming epidemics when interpreted by a military discourse do not entitle the public authorities to disregard and especially to unpreparedness in confronting public health agendas. "The" war "between men and mosquitoes is not a war. The knowledge histor of actions of the treatment and epidemias may auxliar in the public context context, including the risk of assumptions in the market inaptos.

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INAPTED BODIES: THE SOCIAL IMPACTS OF THE EPIDEMICS OF MALARIA, DENGUE, CHIKUNGUNYA AND ZIKA IN BRAZIL.

Abstract

The objective of this study is to analyze the social impacts of malaria, dengue, chikungunya and zika epidemics in Brazil. Understand how so-called neglected diseases and their overwhelming epidemics compromise the social development of the population by producing unfit bodies. During decades of the twentieth century, malaria constantly left unfit men, women and children, at the end of the same century the epidemics of dengue in the hottest year seasons disfavoured sporadically the bodies of Brazilians. In the 21st century, new epidemics such as chikungunya and zika temporarily marked and in some cases definitely the bodies of our society. The historical knowledge of the structures and operations of control, treatment and fight against the epidemics that have protagonists the mosquitoes can help us to face new epidemics that found in the urban space an environment conducive to its development partly explained by the lack of information, policies prevention and neglect of public authorities. In this sense, the evaluation of the social impacts of epidemics is fundamental for the construction of projects that aim at human development in all its spheres: social, political and economic.

Key Words: Body; Malaria; Dengue; Chikungunya; Zika.

LES CORPS INAPTÉS: LES IMPACTS SOCIAUX DES ÉPIDÉMIES DU PALUDISME, DE LA DENGUE, DU CHIKUNGUNYA ET DU ZIKA AU BRÉSIL.

Résumé

L'objectif de cette étude est d'analyser les impacts sociaux des épidémies de paludisme, de dengue, de chikungunya et de zika au Brésil. Comprendre comment les soi-disant maladies négligées et leurs épidémies accablantes compromettent le développement social de la population en produisant des corps impropres. Au cours des décennies du XXe siècle, le paludisme a laissé en permanence des hommes, des femmes et des enfants inaptes, et à la fin du même siècle, les épidémies de dengue au cours des saisons les plus chaudes ont défavorisé sporadiquement les corps de Brésiliens. Au XXIe siècle, de nouvelles épidémies telles que le chikungunya et le zika ont marqué temporairement et, dans certains cas, définitivement les corps de notre société. La connaissance historique des structures et des opérations de contrôle, de traitement et de lutte contre les épidémies dont les moustiques sont les protagonistes peut nous aider à faire face aux nouvelles épidémies qui ont trouvé dans l'espace urbain un environnement propice à son développement, partiellement expliqué par le manque d'informations, de politiques prévention et négligence des pouvoirs publics. En ce sens, l'évaluation des impacts sociaux des épidémies est fondamentale pour la construction de projets visant le développement humain dans tous ses domaines: social, politique et économique.

Mots Clés: Corps; Paludisme; Dengue; Chikungunya; Zika.

CORPOS INAPTOS: LOS IMPACTOS SOCIALES DE LAS EPIDEMIAS DE MALARIA, DENGUE, CHIKUNGUNYA Y ZIKA EN BRASIL.

Resumen

El objetivo del trabajo es analizar históricamente los impactos sociales de las epidemias de malaria, dengue, chikungunya y zika en Brasil. Comprender cómo las denominadas enfermedades olvidadas y sus avasalladoras epidemias comprometen el desarrollo social de la población produciendo cuerpos inaptos. Durante décadas del siglo XX, la malaria constantemente dejaba inaptos hombres, mujeres y niños, al final del mismo siglo las epidemias de dengue en las estaciones más cálida año incapacitaba de forma esporádica los cuerpos de brasileños. En el siglo XXI nuevas epidemias como

chikungunya y zika marcaron temporalmente y en algunos casos definitivamente los cuerpos de nuestra sociedad. El conocimiento histórico de las estructuras y operaciones de control, de tratamiento y combate a las epidemias que tienen protagonistas los mosquitos puede ayudarnos en el enfrentamiento de nuevas epidemias que encontraron en el espacio urbano un ambiente favorable para su desarrollo en parte explicado por la ausencia de informaciones, de políticas de prevención y negligencia de las autoridades públicas. En este sentido, la evaluación de los impactos sociales de las epidemias es fundamental para la construcción de proyectos que tienen como objetivo el desarrollo humano en todas sus esferas: social, política y económica.

Contraseñas: Cuerpo; Malaria; Dengue; Chikungunya; Zika.

CORPOS INAPTOS: OS IMPACTOS SOCIAIS DAS EPIDEMIAS DE MALÁRIA, DENGUE, CHIKUNGUNYA E ZIKA NO BRASIL.

Resumo

O objetivo do trabalho é analisar historicamente os impactos sociais das epidemias de malária, dengue, chikungunya e zika no Brasil. Compreender como as denominadas doenças negligenciadas e suas avassaladoras epidemias comprometem o desenvolvimento social da população produzindo corpos inaptos. Durante décadas do século XX, a malária constantemente deixava inaptos homens, mulheres e crianças, no final do mesmo século as epidemias de dengue nas estações mais quente ano incapacitava de forma esporádica os corpos de brasileiros. No século XXI novas epidemias como chikungunya e zika marcaram temporariamente e em alguns casos definitivamente os corpos da nossa sociedade. O conhecimento histórico das estruturas e operações de controle, de tratamento e combate as epidemias que têm protagonistas os mosquitos pode auxiliar no enfrentamento de novas epidemias que encontraram no espaço urbano um ambiente favorável para seu desenvolvimento em parte explicado pela ausência de informações, de políticas de prevenção e descaso das autoridades públicas. Neste sentido, a avalição dos impactos sociais das epidemias é fundamental para a construção de projetos que tem como objetivo o desenvolvimento humano em todas as suas esferas: social, política e econômica.

Palavras Chaves: Corpos; Malária; Dengue; Chikungunya; Zika.