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Region: Lack Of Profitability Prevents Research On Chagas Disease

by LADB Staff
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In 2009, governments, scientists, universities, and nongovernmental organizations (NGOs) of Latin America's Southern Cone countries marked the 100-year anniversary of the discovery of Chagas disease, but the numerous events in Argentina, Bolivia, Brazil, Paraguay, and Uruguay the endemic area par excellence made it clear that there is no coordinated research, only isolated and sporadic actions to attack the causes of the disease. There are not even reliable statistics with which to evaluate the real incidence of Chagas. Although lacking particulars, and admitting that the figure of between 15 million and 18 million infected people in Latin America is merely an estimate, experts agree that the illness has no cure and is often fatal. It can be prevented through combined policies aimed at eradicating the vector insect, and, if detected and treated at birth, it is 100% curable in newborns. But experts also agree on another alarming fact: in the five Southern Cone countries, Chagas kills more people than AIDS, H1N1, or dengue. The disease was discovered in 1909 by a Brazilian doctor, Carlos Chagas, and described 40 years later by an Argentine doctor, Salvador Mazza. It is transmitted by the vinchuca, a bloodsucking, nocturnal insect that reproduces exponentially and has a prolonged lifespan of between 15 and 17 months. The natural habitat of the vinchuca also known as barbeiro (Brazil), pito (Colombia), chinche (Central America) is hot climates, and it is often found in poor adobe-brick huts and thatched-roof houses, nesting in cracks in walls or in the humid warmth of roofs. In the Southern Cone, the largest endemic area for Chagas, where experts say 15% of all affected Latin Americans are found, is the Gran Chaco, which covers parts of Argentina, Bolivia, Paraguay, and Brazil. More than 300 native communities live in extreme poverty in the 31,400-sq km area between the Andean high plains and the Paraguay and Parana rivers. However, the vinchuca is able to migrate and adapt to other seemingly inhospitable climates. In Argentina, for example, large colonies of the insect have been found in the southernmost province of Tierra del Fuego, which has long winters with below-zero temperatures. Vector transmission responsible for most cases The vinchuca is born healthy, and its only food is blood. If the vinchuca first bites a healthy person, the insect does not contract Trypanosoma cruzi (T cruzi), the parasite that develops in the abdomen and brings on the disease. But if the insect's first victim is already infected with Chagas, it will transmit the disease to everyone else it bites. The vinchuca comes out at night, when people are sleeping. Its bite is painless, and it also defecates at the site of the bite. Unaware that they have been bitten by a vinchuca, the victims scratch the bite and the insect's feces enter the bloodstream causing an infection that is often diagnosed only years later. Catalina Antico Penna, director of the Argentine NGO Asociacion de Lucha Contra el Mal de Chagas (ALCHA), says, "Transfusions are also a frequent source of transmission and are much more serious, since a large quantity of infected blood enters a healthy organism, which can then collapse from Chagasic shock. Verification of this method of transmission has led blood banks to begin practices of donor testing and screening. A pregnant woman can also transmit the infection to her child through the placenta. Eradicating the vinchuca can only be achieved with a two-pronged attack. First, rural houses and schools in the endemic area must be burned, an option authorities are not prepared to carry out because of the high cost. Second, periodic fumigation must take place, something...
that agencies involved in fighting Chagas say is done only sporadically and without reaching the entire at-risk area. Thus, the disease continues claiming victims. The World Health Organization (WHO) has raised its estimate of the number of people infected in Latin America to between 16 million and 18 million and says that some 100 million (one-sixth of the population) could be at risk of contracting the disease. The lack of concrete actions to combat the disease has prompted the WHO to include Chagas among its group of "neglected diseases." Pharmaceutical companies uninterested in "poor people's disease" Term "the poor people's disease" by Dr. Chagas, it is still called that by specialists who decry the indifference of laboratories that do not put resources into developing medicines to treat it. "The unbreakable link between Chagas and poverty means that the pharmaceutical industry has no interest in developing a vaccine," said Argentine expert Sonia Tarragona, director of Fundacion Mundo Sano. "Who will they sell the vaccine to if those who could contract Chagas would never be able to buy it?" Until the mid-1990s, during the two-term administration of Argentine President Carlos Saul Menem (1989-1999), Roche pharmaceutical company manufactured Benznidazol, but, when it was not profitable, the company stopped producing it and offered to give the license to the Ministerio de Salud (MSAL). The authorities did not accept, and today Argentina has to import the medicine from Brazil, which took the Swiss multinational up on the offer. Using the same arguments as Roche, Bayer, which makes Nifurtimox, the second medicine proven effective against Chagas, stopped producing the drug at almost the same time. Efforts to find answers Today researchers are trying, without any backing, to support development in the fight against Chagas. Spain's Pilar Mateo travels every year to Bolivia bringing her discovery: Inesfly, a paint that combines two types of insecticide with a quinine inhibitor that eliminates the vinchuca. Mateo says that painting the walls of homes has eliminated the infected adult insects and prevented immature vinchucas from developing. In Brazil, various researchers say that they are making progress. Some, with a medicine whose basic element is selenium; others, with a treatment that shows good initial results using carrageenan, a substance extracted from a variety of algae from Ireland. A group of researchers at the state Universidade de Sao Paulo (USP) is experimenting with extracts from 92 native plant species. Finally, a team linked to the well-known Instituto Butantan was able to isolate two molecules in the poison from a type of toad that have proven effective in eliminating the parasites that transmit the disease. But the research has not yet progressed to the final stage. No country maintains accurate statistics on Chagas. In Argentina, MSAL speaks of 2.5 million people infected and put the number of deaths at between four and six a month. In Paraguay, a 2009 study by the Universidad Nacional de Asuncion (UNA) found that there might only be between 140,000 and 150,000 people infected compared with 500,000 registered Chagas victims in 1992. Bolivia is the critical country. Fundacion Pro Habitat (FPH) says that at least 1.8 million people (about 23% of the population) might be infected and another 3.7 million are at risk of contracting the disease. Uruguay and Chile have not reported cases in the last decade. Brazil, the country where Chagas originated, said in 2007 that it had succeeded in completely interrupting transmission of the T cruzi parasite. Brazil, interestingly, has the same incidence of the disease as Uruguay and Chile, the only countries where regular control and fumigation campaigns were carried out. Outside the Southern Cone, in Colombia, which is within the Andean endemic area, various private agencies point to a reduction in the number of cases from 1.2 million to 700,000, but they warn that at least 8 million Colombians are exposed to vectorial transmission of the disease. In recent decades, migration has been identified as the principal cause of the spread of the disease to areas never before affected. Thus, in Argentina, Chagas has been found in the large urban centers and even in the cold southern provinces, and the disease has spread abroad, carried by poor South Americans those whom Europeans refer to pejoratively as sudacas who emigrate looking
for a better life. In Spain, where the government has declared a state of alert in public hospitals, unofficial figures from various sources put the number of cases at between 68,000 and 100,000, all of them South American citizens or children of Spaniards, who, until the 1970s, were moving in large numbers to Southern Cone countries. The most affected area is Galicia, place of origin for the largest number of Spaniards who fled the hunger of the dictatorship of Gen. Francisco Franco (1939-1975). Many were unable to make it big in America (hacerse la America), as they said in those times, and today they are the grandparents or parents of those who are returning to Europe carrying the passport that allows them to legally live and work and, perhaps, to bring the "illness of the poor."

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