

Five-nitroimidazole drugs: Over 50 years in use in human giardiasis, are still efficacious?

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For more than 50 years, 5-nitroimidazole (5-NI) drugs, especially metronidazole, have been in use in the treatment of children and adults with giardiasis. This disease, caused by the flagellated protozoan *Giardia lamblia*, is recognised as a major cause of parasite-induced diarrhoea, and is currently an important public health problem, placing a heavy burden on both diagnostic and treatment services at health care institutions, mostly in developing countries, but also in highly industrialized countries. Although giardiasis has been a threat to mankind for thousands of years, until recently, it was relatively neglected. As a consequence, the pharmaceutical industry has had few incentives to engage in the development of new drugs and, at present, nitazoxanide is the first new drug developed for treating giardiasis in more than 20 years. Currently, the increasing number of reports of refractory cases with 5-NI drugs and other anti-giardial agents has raised concern and led to a search for other compounds, some of which have arisen due to the introduction of drugs initially addressed to other diseases. Information is required to know if 5-NI are still efficacious in the present context, in which resistance to common antimicrobials is a threat. Additionally, it is discussed some of the most important points of anti-giardial pharmacotherapy available at present and the future prospects of development of new agents.

Biography

Angel Escobedo is a Ph.D. student at the Institute "Pedro Kouri", Cuba. In 2010, the Pan-American Association of Infectology awarded him with the medal "Eduardo Gotuzzo" for his research in the field of Infectology. Escobedo has long-standing interest in antimicrobial therapy in giardiasis, and its public health impact, in which his research have been focused for more than 15 years, with numerous contributions to scientific journals. He is the vice-chairperson of the Cuban Microbiology and Parasitology Society and represents the Pan-American Association of Infectology in Cuba. He is involved in clinical research and teaching, particularly Parasitology, medical undergraduates and postgraduates.

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