

Urbanorum: a case of scientific negligence

Urbanorum: un caso de negligencia científica

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A recent report described one diarrheic episode that clinically responded to metronidazole as due to “Urbanorum spp” in Ecuador¹. In this Ecuadorian case report differential diagnosis was mentioned only as done by the results from a reference laboratory, but without details of immunological or special stool stains, such Kinyoun, to discard other etiologies. The authors wrote that diagnosis was based on microscopic observation of structures like those reported in 1994, by Professor Francisco Tirado Santamaría from the Universidad Industrial of Santander, but when you look for the reference of this “scientific work” you found a webpage destined to store undergraduate student’s homework documents¹. The lack of description of confirmatory tests in cases published in one journal ranked Q3 in Scopus (American Journal of Case Reports) highlights the necessity of scientific evaluation with high standards for case reports. Infectio have a refusal rate of 70% for clinical case reports, mostly justified because these are not accompanied by a microbiological confirmation of the species. The original description of Professor Tirado is not available in scientific journals and does not comply with the minimum rules that need to be considered as a new parasite organism². Microscopic identification is not confirmatory, at least if quasi-pathognomonic clues are described, but also micrometry, demonstration of nuclei, membrane characteristics, and the presence of organelles². Even microscopic observation is not enough to eliminate subjectivity. Many artifacts can be observed in stools, such as pollen, detritus from food or contaminated lugol³. To establish a causal relationship between microscopic findings,

we need more than a description of microscopic structures. Thus, the structures shown in the picture accompanying the description of the case are considered by many experts to be adipose cells extruding gross filament-like pseudopods⁴. No attempts have been made to stain and show the cellular structure, organelles, and nuclei. Clearly, more studies are necessary to elucidate the true nature of the microscopic structures. However, despite these concerns and largely insufficient analysis about the real nature of “Urbanorum spp,” it is highly surprising that health personnel and members of the scientific community continue making reports about this microscopic structure without any detailed rigorous analysis that it is required to accept a new human pathogen capable of generating clinical diseases. With the currently available evidence, “Urbanorum spp” cannot be described as parasitic pathogen associated with diarrheal syndrome. Clinicians should be aware that the etiological identification of diarrhea is of utmost importance to initiate a specific treatment that prevents serious complications. An important task for parasitologists should be to demonstrate the kind of artifact that can explain the bizarre and unusual structures described as “Urbanorum spp” and its implication in diarrheal syndrome. Finally, it is even more important to strengthen the formation of scientific thinking by physicians and the non-delegable role of journals⁵. The physician should be more exigent about the demonstration of etiologies to prescribe adequate and pertinent treatment; otherwise, it will expose patients to wrong diagnosis with important potential consequences that can be life-threatening.

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