

LETTERS

CHRONIC KIDNEY DISEASE AMONG AGRICULTURAL WORKERS IN CENTRAL AMERICA

I read the editorial by Wesseling et al.¹ on Chronic Kidney Disease (CKD) in Central America with interest, for I too live in the region. As a US family physician and anthropologist working in El Salvador—a knowledgeable observer of recent debates on the topic—I offer the following observations for readers of the *Journal* regarding the authors' analyses:

1. As Wesseling et al. mention (but do not cite), other articles challenge their own conclusions^{2,3};
2. Powerful ideological and commercial concerns have aligned themselves on opposite sides of the scientific debate as to the etiology of CKD in the area;
3. Because of these polarized positions, professional discussion on the relative merits of respective hypotheses is strained;
4. Given the intricacies of the above situation and the lack of truly confirmatory evidence one way or another, it is too soon to suggest that one etiologic hypothesis take priority over others⁴; and,

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5. Because of multiple economic, social, and historical reasons, the work conditions of agricultural laborers in Central America are harsh. Whether triggered by repeat episodes of heat stress and dehydration or agrochemical exposure (or any other hypotheses), the incidence of CKD in the area can likely be reduced by occupational, environmental, and health-related reforms that make this work more humane.

CKD in Central America is clearly a serious problem. Thoughtful, open, and respectful discussion is critical to any scientific inquiry into its origins or public health intervention toward its prevention. May we all hope that clinicians, investigators, and policymakers in Latin America and around the world can work together in this manner to lessen the suffering caused by the disease. ■

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WESSELING ET AL. RESPOND

We appreciate Ventres' observations and share his goal to reduce chronic kidney disease incidence "by occupational, environmental, and health-related reforms that make this work [agricultural labor] more humane." In our summary of the workshop on the Mesoamerican nephropathy (MeN) in San José, Costa Rica, November 2012, we also noted the need for a broad understanding of the epidemic and we call readers' attention to the full report¹ that details the comprehensive discussion of the epidemic including the issues raised by Ventres. In the workshop, we took account of the several points raised in his letter, but in our editorial we wished to call special attention to the growing evidence of heat stress and dehydration as an essential cofactor in a likely multifactorial disease etiology. Preliminary reports presented at the workshop have been published since then,^{2,3} further strengthening the scientific evidence of an association between heat stress and dehydration and MeN. However, the possibility of other environmental agents, such as metals or pesticides along with ingested agents such as nonsteroidal anti-inflammatory drugs or fructose, also playing a role clearly remains an open issue, and we refer the readers to reviews on the topic.^{4–6}

We agree with Ventres that working conditions of agricultural laborers in Central America are extremely harsh and part of the social determinants of the disease, in particular working conditions on sugarcane plantations. Workers will benefit from occupational and environmental health interventions, such as reducing pesticide and heat exposures, regardless of their relationship to the epidemic. We support public health actions such as those undertaken by the Ministry of Health of El

Salvador toward prohibition of toxic pesticides, by the Ministers of Health of Central America and the Dominican Republic (COMISCA) to recognize and address MeN, and by the Pan American Health Organization to raise awareness and promote intergovernmental, inter-ministerial and intersectoral collaborations to alleviate the situation. However, as scientists, we simultaneously bring forward the best evidence available to date as a basis for preventive actions that can specifically and therefore more efficiently target the Mesoamerican nephropathy.

We repeat our appeal to the international research and public health communities (echoed in Ventres' letter) to combine efforts to address this serious, poverty driven, public health problem from all possible angles. ■

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