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Blog

The negative effects of climate change on human health is a topic of discussion that garners greater attention with the increases in severe storms, flooding, drought, wildfires, and insect- or animal-borne diseases. A recent report by Siddiqi et al. of Zambia’s first known Konzo outbreak illustrates this sad, new reality and is discussed in a recent Without Borders blog posting.

“…Konzo, a permanent upper motor neuron injury that presents with abrupt spastic paresis, was first reported from the Congo in 1938 and further described by William Howlett from Tanzania in 1990. The association of Konzo with drought and famine in regions with cassava-based diets was long recognized. Cassava is a nutrient-dense root that requires relatively little rain, is more resilient than maize and rice, and is grown largely for local consumption rather than as a cash crop.

Cassava contains linamarin which, when eaten, is converted to cyanide. An impressive body of research has subsequently shown that Konzo’s neurotoxic injury likely results from chronic cyanide toxicity when this co-occurs with long-standing poor nutrition particularly among individuals with diets low in the sulfur amino acids needed to metabolize the toxins. Without insights into cassava’s potential neurotoxicity, traditional preparations of cassava include pounding and washing procedures largely eliminating the potential toxins and allowing cassava to be an important staple nutrient for many regions of the world that frequently suffer from food insecurity.

Unfortunately, drought resistant cassava varieties may have higher innate levels of cyanide toxins…”

References
