Is Chronic Arsenic Poisoning Associated With Protein Aggregate Pathology?

https://neurodegenerationresearch.eu/survey/is-chronic-arsenic-poisoning-associated-with-protein-aggregate-pathology/

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Research Abstract

Shallow tube-wells installed in Bangladesh in the 1970:ies and 80:ies were presumed to deliver safe drinking-water. Years later, the first cases of arsenic induced skin-lesions were identified and it was found that the drinking water was the source for the arsenic exposure. In Bangladesh alone, it is estimated that between 35-77 million people are at risk for arsenic derived health issues. Chronic arsenic poisoning results is a wide variety of pathological manifestations under the collective name arsenicosis with devastating consequences for afflicted individuals and for Bangladesh as a nation. It is established that protein misfolding is linked to a wide variety of diseases both as a cause and consequence. Misfolded proteins accumulate in many cell and

organ types with apparent specificity for select proteins for certain diseases. The mechanisms involved are matters of intense research. Current research shows that self-propagation of misfolded proteins is a plausible mechanism for propagation of disease. Arsenic in various chemical forms is associated with inducing aberrant protein folding in laboratory experiments. With this indication it also follows that if arsenicosis is associated with protein aggregate pathology (e.g. amyloidosis) preventive measures mitigating the intake of arsenic may still propagate the misfolding process necessitating alternative therapies for afflicted individuals.

Further information available at:

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