

Abstracts

15. CONTEMPORARY POLLUTION DUE OLD URANIUM TAILS (13)

Dr. Igor Hadjamberdiev, Rustam Tukhvatshin
Erkindik 27=9, Bishkek 270040, **Kyrgyzstan**

The areas of our study are uranium mining areas (with tails and dumps) Min-Kush, Kadji-Sai, Mailuu-Suu. These areas situated in different parts of Tien-Shan region. We study the content (and correlations among): level of uranium in environment, immune function and level, level in human teeth.

It has been found: content of uranium in river water under tails about $2,0 \times 10^{-5}$ gm/litter, and high level in drinking water too $2,0-4,0$. Drying grass and flowers uranium content was $0,04-0,51 \times 10^{-5}$ gm/gm, most high content were in Tacniatherum crinitum and Atgilops triuncialis. Lams tissues contain $0,005-2,44$ mg/g in Min-Kush, $0,03-0,107$, in Mailuu-Suu, and $0,001-0,048$ mg/g in Kadji-Sai.

Human teeth uranium content (Mailuu-Suu): in milk-teeth $0,481 \times 10^{-6}$ gm/gm, in former miners $0,7684 \times 10^{-6}$ gm/gm. Inhabitants of the area, which not working in uranium industry have $0,6876 \times 10^{-6}$ gm/gm.

There was low level of immune function (lymphocytes, IgI globulin, etc) in all three regions (in child, in adults, in uranium-mining worked people).

There is no doubt of the positive correlations of uranium pollution of water (by underground infiltration from tails) on one hand and, on the other hand - a) grass, b) lambs body, c) human teeth, d) human immune function. Levels of uranium in teeth strictly depend on time of mining contact.

16. HYDROXOCOBALAMIN AS A CYANIDE ANTIDOTE: EMPIRICAL USE, SAFETY, EFFICACY, AND CONSIDERATIONS FOR STOCKPILING (7)

Dr. Alan H. Hall, M.D.

TCMTS, Inc., P.O. Box 184, Mile 5.0 Pass Creek Road Elk Mountain, WY 82324, USA and Department of Preventive Medicine and Biometrics, University of Colorado Health Sciences, Denver, Colorado, **USA**

Cyanide is a well-known toxic terrorism agent and is a major cause of mortality and morbidity in smoke inhalation victims. Terrorist attacks could start enclosed-space fires with cyanide-poisoned victims, even if cyanide itself was not utilized. Cyanide poisoning cannot be emergently confirmed by laboratory analysis and treatment with safe and efficacious antidotes must be administered empirically.

Hydroxocobalamin has been recently approved by the US FDA and is a safe and efficacious antidote. Its efficacy is comparable to that of other, more toxic, cyanide antidotes. Its mechanism of action involves both direct cyanide chelation (forming non-toxic cyanocobalamin which is excreted in the urine) and nitric oxide scavenging. Adverse effects are usually limited to transient dark red-brown

discoloration of urine, skin, sclera, and mucous membranes.

Antidotal doses have not caused allergic reactions in cyanide-poisoned patients and only minor and easily-treated allergic reactions occurred in 2 of 136 normal volunteers. Transient, asymptomatic hypertension and reflex bradycardia have occurred in some normal volunteers, but not in seriously ill smoke inhalation victims not having significant cyanide poisoning. Hydroxocobalamin is a safe and efficacious antidote and can be empirically administered in pre-hospital or emergency department settings.

It is therefore suitable for inclusion in national or multinational medication stockpiles and is already included in some national programs in the European Union.

Key words: Cyanide poisoning, Toxic Terrorism, Smoke Inhalation, Antidotes, Hydroxocobalamin

17. STRATEGIC PLANNING FOR EMERGENCIES: LESSONS LEARNED FROM KATRINA (7)

^{1,2}**Dr. Murray G. Hamilton**, ²Hassan Mashhadi and ²Duane Habeck

¹University of Denver, 2250 E. Iliff Ave, Denver Colorado, 80208 and

²All Hazards Management, LLC, 3561 S. Quebec St. Denver, CO 80127-1334, **USA**

The tragedy that was unleashed when hurricane Katrina hit the United States southern coast and most particularly New Orleans is still being examined. Regardless of the allocation of blame for the response, or lack thereof, several very important components of what needs to be included in effective strategic, management, and response plans were revealed in the aftermath.

The first tenet is to be sure not to make the problem worse. In other words, the goal is to prevent emergencies from becoming a disaster that subsequently grows to a catastrophe. Essential components that need to be addressed start with protection and rescue of affected people. Several characteristics of an effective strategic plan that will address saving lives include leadership, continuity of government and business, effective communications, adequate evacuation plans and security of electronic infrastructure.

Katrina analysis confirms that the process to integrate all the components is too complex to be accomplished *ad hoc*. This presentation will outline objective methodology to successfully integrate the various facets that comprise an effective strategic plan, management plan, and tactical plans.

18. SCIENCE AND SECURITY POLICY: THE CASE OF ADVANCED PATHOGENS (8)

Dr. Elisa D. Harris

Center for International and Security Studies at Maryland College Park, MD 20742, **USA**

HR0700029

HR0700030

HR0700031

HR0700032