

Harmful effects of DU in the offspring of the military personnel employed in DU contaminated regions

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Abstract

In 1999, during the NATO attacks on Kosovo, from AT-10 aircrafts has been shot over 50000 30-mm projectiles which contained approximately 15 tones of DU. Besides DU, projectiles contained products of DU radioactive decay as well as americium, neptunium, plutonium and technetium. Due to DU contamination military personnel employed near hit targets could be contaminated and irradiated. Besides the harmful effects in exposed military personnel, harmful effects were noticed in their offsprings, too.

DU can cause genetic and teratogenic harmful effects in the embryos/fetus. It is concentrated in semen of contaminated males and also can contaminate the embryo/fetus through placenta. DU, as a toxic and radioactive element, can cause variety of harmful effects, but the most important are the effects on DNA which are the cause of many diseases.

The aim of this paper is to examine is there any change in the incidence in heritable effects, congenital malformations, malignant diseases, endocrine and immune disorders. For that reason we compared the incidence of these diseases in the offspring's of military personnel born from 1995-1999 (1204) with the children born from 2000.-2004. (1131) / and 2005-2008.

Our results showed higher incidence of congenital malformations and chromosomal abnormalities (12.55% vs 4.57%), with highest incidence of foot deformity-52.04% and hip deformity. These abnormalities were followed with immunological disorders and dysfunction of the urine bladder. Endocrine diseases were increased too(2.16%:1.63%). In this period higher incidence of malignant diseases was not noticed, but in the second period (from 5-9 year) after 1999, higher incidence of malignant hematological diseases was noticed, as well as Down Sy.

During the conflicts future parents as well as embryo/fetus are exposed to many harmfulness and it is very hard to separate the influence of each. Considering the fact that the effects of DU, could be delayed and synergistic with other harmful factors it is important to be followed-up for very long time.

KEYWORDS: Depleted uranium, harmful effects, embryos/fetus effects, DNA, Down Sy.