

**The Emergency Workers Medical Observation at the Long Time after the Chernobyl NPP Accident**N. Tkachenko<sup>a</sup>, M. Kaplan<sup>a</sup> and I. Zamulaeva<sup>b</sup><sup>a</sup>*Medical Radiological Research Centre, Koroliov str. 4, 249036 Obninsk, Russian Federation;* <sup>b</sup>*Medical Radiological Research Center RAMS, Korolev St., 4, Obninsk, Kaluga reg., Russia, 249036 Obninsk, Russian Federation**zamulaeva@mail.ru*

The approximately 500 emergency workers (liquidators) have been observed in the Treatment and Diagnostic center (Obninsk, Russia). The majority of them were men worked in Chernobyl NPP area in 1986. The total dose of external irradiation was up to 250 mSv. The basic pathology was cardiovascular diseases: ischemic heart disease, hypertension, multifocal atherosclerosis. Associated diseases were osteochondrous, bronchitis, goitre, obesity, prostatitis. In some cases (N=6) the oncopathology has been estimated (thyroid cancer - 2, prostate cancer - 2, kidney cancer - 1, stomach cancer - 1). The frequency of lymphocytes bearing mutated T-cell receptors was assessed in 184 liquidators at the long time after the Chernobyl accident. The mutant cell frequency was elevated in 31 patients of this group as compared with control group. We have not found any difference in the clinical data and the somatic diseases manifestation among liquidators and other nonexposed patients. The treatment of liquidators undergoes according to the modern approaches. The emergency workers demonstrated the alterations in the psychological status: high level of personal anxiety, hesitation, indecision, tension, pressure, inner conflict, the reducing of social activity. The MMPI profile (multifactor method of personal identification) of liquidators with cerebrovascular diseases was characterized by the mixed response with the hypochondria prevalence. The indices of the hypochondria, depression, hysteria and psychoasthenia scales in the liquidators group were significantly higher than in the control group patients with the same diseases but had no contact with ionizing radiation. Cerebrovascular diseases presence was not the main reason of the psychological status abnormalities in liquidators. The prolonged psychological impact of the Chernobyl accident caused somatic complains and disease-orientated behavior of liquidators and resulted in reducing their social activity. Thus the medical screening of emergency workers and the special psychological support of them should be continued. The special medical observation of liquidators with the elevated level of mutant cell frequency should be prolonged because of possible high cancer risk in this group.