



Letter to the Editor

Cytogenetic evaluation of cataract patients occupationally exposed to ionizing radiation in northeast China

S.M.J. Mortazavi, S.A.R. Mortazavi and M. Paknahad

Ionizing and Non-ionizing Radiation Protection Research Center (INIRPRC),
Shiraz University of Medical Sciences, Shiraz, Iran

Corresponding author: M. Paknahad
E-mail: paknahadmaryam@yahoo.com

Genet. Mol. Res. 15 (4): gmr15049464
Received October 20, 2016
Accepted October 20, 2016
Published November 3, 2016
DOI <http://dx.doi.org/10.4238/gmr15049464>

Copyright © 2016 The Authors. This is an open-access article distributed under the terms of the Creative Commons Attribution ShareAlike (CC BY-SA) 4.0 License.

Dear Editor,

With great interest, we have read the article by Zhou et al. (2016) entitled “Cytogenetic evaluation of cataract patients occupationally exposed to ionizing radiation in northeast China”, which is published in Genetics and Molecular Research 15 (3): gmr.15038687. Zhou et al. (2016) in their article investigated the association between chromosomal aberrations in cataract patients and occupational exposure to ionizing radiation in the Chinese population. Despite its challenging theme, the paper authored by Zhou et al. (2016) has a basic shortcoming. In this report, the authors have reported that chronic occupational exposure to ionizing radiation had a significant correlation with cataract development in the Chinese population. The main shortcoming of this study comes from this point that the authors have not measured the effective annual dose received by the radiation workers participated in their study. It is worth noting that the effective annual dose received by radiation workers strongly depends on

key factors such as if they are involved in interventional radiology. In this light, when the magnitude of the occupational exposure is not clearly known, tracking the role of radiation in any biological effect will be hard or even impossible (Mortazavi, 2015; Mortazavi and Jooyan, 2015). These researchers have not even reported the proportion of the diagnostic workers who were involved in interventional radiology (fluoroscopic) procedures, which normally cause significantly higher levels of exposures. It should be noted that some challenging studies have revealed that the effective dose for 91% of radiation workers was lower than if they had stayed at home (Kemerink et al., 2011). In this light, we strongly believe that the results obtained in this study are significantly affected by factors other than occupational exposures.

REFERENCES

- Kemerink GJ, Frantzen MJ, de Jong P and Wildberger JE (2011). Less radiation in a radiology department than at home. *Insights Imaging* 2: 275-280. <http://dx.doi.org/10.1007/s13244-011-0074-7>
- Mortazavi SM (2015). Mutations of the human interferon alpha-2b (hIFN-a2b) gene in occupationally protracted low dose radiation exposed personnel. *Cytokine* 76: 594. <http://dx.doi.org/10.1016/j.cyto.2015.04.007>
- Mortazavi SM and Jooyan N (2015). Assessment of selected B cells populations in the workers of X-ray departments. *Int. J. Occup. Med. Environ. Health* 28: 405-406.
- Zhou DD, Yao L, Guo KM and Lu CW (2016). Cytogenetic evaluation of cataract patients occupationally exposed to ionizing radiation in northeast China. *Genet. Mol. Res.* 15: gmr.15038687.