Radioactive contamination in drugs: A pharmaceutical topic in a nuclear accident crisis – A concern

Sir,

An interesting global public health consideration is the problem of a nuclear accident crisis originating from the destroyed nuclear power plant in Fukushima, Japan. Since the radioactive nuclides that have leaked can be hazardous, this disaster is an important concern at present. A huge number of radioactive nuclides were expected to have been expelled into the environment after destruction of the nuclear electricity plant, and this has caused a problem of environmental contamination. The contamination in the environment may be an important source of radiohazards to human beings. Indeed, an environmental contamination post a nuclear accident, by radionuclides such as cesium 137, is a proven problem. Contamination can be expected in many things including 'drugs' Here, the author would like to discuss an important problem, radioactive contamination in drugs.

There is no doubt that radioactive contamination in drugs is a very important consideration in pharmaceutical science.[1,2] Radioactive contamination in any pharmaceutical process is considered problematic and this is a point of concern in quality control.[3] As radioactive contamination is not acceptable, it is a rule that a general drug (not a specific radioactive drug) has to be free from radioactive components. Due to the good manufacturing practice at present, this problem is expected to be controlled. However, recent reports on contamination can be seen, especially in herbal drugs.[4] Undeniably, the contamination of radionuclides in many vegetables post the nuclear accident period is proven.[5,6] In the post Chernobyl crisis, radionuclide contamination could be detected in many medical plant products, including tea and juniper.[6] Of interest, although a lot of care is taken with regard to foods from contaminated areas,[7] there is little attention paid to the drugs from those settings. There are many concerns about some drugs, to prevent or fight their radioactive contamination, but there is lack of concern about the possible contamination within the drugs.

As there are many drugs manufactured in the highly contaminated area (Japan and nearby countries) and exporting of those drugs to several countries is observed, the present question is, whether it is the time to set a system for surveillance of radioactive contamination in the drugs. There should be an effective quality control process for early detection of the contamination. Radioactivity measurement of drugs and herbal product samples from the contaminated areas can be a good approach.[8] This can be done as an international quality assurance system.[9]

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