EURADOS/REMPAN Review on Monitoring and Dosimetry for Radionuclide-contaminated Wounds

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The European Radiation Dosimetry Group (EURADOS) and the WHO's Radiation Emergency Medical Preparedness and Assistance Network (REMPAN) have collaborated to review best practices for managing radionuclide intakes through wounds. Rapid response and decisions on wound decontamination, tissue excision, and chelation therapy are based on measurements of the exposed individual and preliminary dose assessments using reasonable default assumptions. The goal is to minimize exposure, prevent tissue reactions, and reduce the risk of stochastic effects. The management of a contaminated wound is always case-specific, but some general procedures typically apply for a proper evaluation of the contamination case. Medical doctors (surgeons and toxicologists) and internal dosimetrists should work together in the management of the contaminated wound case, with internal dosimetrists providing expert advice to aid clinical decision-making and communication with the patient and his/her family. The ISO standard 20031:2020 provides guidelines on the monitoring and dosimetry for internal exposures due to wound contamination with radionuclides. The Clinical Decision Guide was proposed by the National Council on Radiation Protection and Measurements in its Report 161 to assist physicians in making treatment decisions for individuals with internal radionuclide intakes. Best practices for medical treatment, based on previous experience, are presented here.

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