Sp28-4

Terrorist Paris Attack: Lessons in Occupational Health

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Introduction: We aim to describe the multiple aspects of the role that occupational health practitioners might play, by focusing on the recent example of the Paris terrorist attack of November 2015.
Materials and Methods: During and after the Paris attack, occupational practitioners, in collaboration with emergency and security professionals, were involved in psychological care, assembling information, follow-up, return-to-work, and improving in-company safety plans.
Results: In the critical phase, the occupational practitioner cares for patients before the emergency professionals take charge, initiates the psychological management, and may also play an organizational role for company health aspects. In the post-critical phase, he or she would be involved in monitoring those affected by the events and participate in preventing, to the extent possible, posttraumatic stress disorder, helping victims in the return-to-work process, and improving procedures and organizing drills. In addition to their usual work of primary prevention, occupational practitioners should endeavor to improve preparedness in the anticipation phase, by taking part in contingency planning, training in first aid, and defining immediately applicable protocols.
Conclusions: In conclusion, in massive catastrophic events, occupational health practitioners are more and more frequently involved in the management of such situations.

Special Session 29 Pesticides Issue with a Focus on Glyphosate

Chair: Claudio Colosio

Session introduction

This Session deals with different aspects of the widely used pesticide, Glyphosate, its toxicological profile and carcinogenic potential. Glyphosate-based herbicides have effects on occupationally exposed persons and general population. Global studies with experimental evidence and developments in evaluation of carcinogenicity of Glyphosate, its toxic effects and current risk-assessment will be presented. Whether the classification of chemicals under carcinogenic effects should be continued or not will be discussed.

Sp29-1

The Global Glyphosate Study: experimental evidence on the most widely used herbicide worldwide

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Introduction: The Ramazzini Institute, together with an international group of independent Institutes and Universities, has launched in 2017 a pilot study and in 2019 started the most comprehensive study (long-term integrated study) ever on glyphosate-based herbicides (GBHs), world's most used weedkiller. The study is named Global Glyphosate Study
Materials and Methods: In the pilot study, pure glyphosate or Roundup Bioflow, were administered to SD rats in drinking water at 1.75 mg/kg bw/day to F0 dams starting from the gestational day (GD) 6 (in utero) up to postnatal day (PND) 120. In the long-term integrated study, animals were divided in ten study groups: control (drinking water), pure glyphosate (at 0.5, 5 and 50 mg/Kg/bw/day), Roundup Bioflow (0.5, 5 and 50 mg/Kg/bw/day glyphosate equivalent), and Ranger Pro (0.5, 5 and 50 mg/Kg/ bw/day glyphosate equivalent)
Results: The full results of the pilot study on genotoxicity and pathology will be presented. The study first results of the long-term integrated phase will be presented and its multiple arms include: genotoxicity, prenatal-developmental toxicity, neurotoxicity, multi-generational effects, endocrine disruption and microbiome effects, and, in the long term perspective, carcinogenicity, on SD rats
Conclusions: Results on the Pilot Phase of Global Glyphosate Study showed adverse effects on reproduction-development, microbiome and genotoxocity at exposure levels that are currently considered safe and legally acceptable (US ADI 1,75mg/Kg/bw). The long-term effects and the possible endocrine disruptive effects of GBHs are one of the main focuses of the integrated study.

Sp29-2

Glyphosate-Based Herbicides and Risk for Haematological Malignancy in Exposed Humans: An updated overview

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Introduction: The carcinogenic potential of glyphosate-based herbicides (GBH), is largely debated. Whether exposure to GBH is linked to haematological cancers warrants major concern among the public and scientific community
Methods: Based on our previously conducted systematic review and meta-analysis on GBH and non-Hodgkin lymphoma (NHL), recently published epidemiological studies of all types are included in this overview
Results: The 41% increased NHL risk reported previously (Zhang 2019) is confirmed by a new meta-analysis (Kabat 2021). Donato (2020) reported increased meta-risk at 31% (95%CI: 0.93-1.7) for DLBCL, similar to 29% (1.02-1.63) reported by Boffetta (2021). A pooled analysis (Pahwa 2019) of two case-control studies demonstrated GBH exposure is linked to both NHL and DLBCL. Leon (2019) pooled 3 cohorts and reported a positive association to DLBCL with 36% increased risk (1.00-1.85). A new case-control study (Meloni 2021) showed that follicular lymphoma (FL) risk was elevated 7-fold in subjects with medium-high confidence of ever exposure (OR=7.1, 1.57-31.9). An updated AHS (Andreotti 2018) reported GBH-increased AML risks at Q1 and Q4 as RR=1.62 (0.60-4.38) and 2.44 (0.94-6.32), respectively. After subjects with assigned alternative imputation estimates were removed, the AML risk was increased to 2.65 at Q1 or 3.87 at Q4.
Conclusions: The results from current studies published after IARC's original evaluation indicate GBH are associated with increased risks of haematological malignance, either NHL or its subtype (DLBCL or FL) or AML. The existing human evidence of this link is compelling rather than suggestive.