

## P27. Occupational biotoxicological emergencies of medical and related sectors' workers

Hakan Demirhindi, Muhsin Akbaba

Çukurova University, Faculty of Medicine, Department of Public Health

Occupational toxicology deals with toxicological hazards and risks encountered in occupational settings which do not only include industry or commerce, but also leisure, education, transport and health sectors, too. There are around 70,000 substances identified to be used in workplaces. Around 1,000 new chemicals are introduced each year in the list of substances used in workplaces.

On the other hand, regarding medical or medicine related work sectors including veterinary or laboratories, biological exposures pose a new and not well examined area, in which there are additional routes, sometimes definable as contamination, like injuries during injections, operations, or airborne or droplet transmission of infectious agents in addition to classical routes like inhalation, ingestion and skin absorption in the form of dusts, fumes, mists, vapours and gases in the workplace.

Huanca et al. (2016) reported 45.7% and 38.4% of accidents by biohazard among doctors and nurses, respectively, between 2009 and 2013 in a hospital in Santa Fe (New Mexico, USA).

Rymer et al. (2016) targeted 458 cases with HBV infection in health settings in Poland and found that 86 (19%) were non-clinical health personnel with undefined (86% of these) source of exposure

Cerda et al. (2014) examined occupational biological risk exposure among Chilean workers between 2006 and 2009 and found a frequency of 58% (among 77 calls to a call-center) for health care workers with 42% (22.7/100.000 actual workers) of the agents defined as self-inoculation of veterinary vaccines used in the salmon industry followed by a venomous spider *Loxosceles laeta* bites.

Studies reveal that not only medical staff, and especially emergency medical service workers, but also non-medical staff are vulnerable to occupational biohazards. Specific preventive measures should be considered including education and monitoring.

**Keywords:** Occupational exposure, medical staff, emergency, biotoxicology