



## Toxicovigilance

Toxicovigilance is the active process of identifying and evaluating the toxic risks existing in a community, and evaluating the measures taken to reduce or eliminate them. It involves the analysis of poisons centre enquiries to identify whether there are specific circumstances or agents giving rise to poisoning, or certain populations suffering a higher incidence of poisoning. Toxicovigilance can also reveal whether there is an emerging toxicological problem resulting from, for example, the reformulation of a product or a change to its packaging or labelling, the availability of a new drug of abuse, or an environmental contamination.

Once a problem has been identified the poisons centre is responsible for alerting the appropriate health and other authorities so that the necessary preventive and regulatory measures may be taken. Some examples of toxicovigilance activities:

### 1. Ambiguous label information resulting in overdose

The National Poisons Information Service in the United Kingdom identified a high frequency of enquiries about accidental, ten-times overdoses of an antidote, N-acetylcysteine, used for paracetamol (acetaminophen) poisoning. This was notified to the manufacturer. Further investigation suggested that a contributory factor in the overdoses was the way in which the content of N-acetylcysteine was expressed on the ampoule labels: the labelling information could have been understood to mean that the ampoule contained 200mg in total rather than 200 mg/mL (2g in total). The manufacturers subsequently changed the label so that the content of the N-acetylcysteine was stated more explicitly (*Mant et al (1984) British Medical Journal, 289 (6439):217-219*).

### 2. Reformulation of a waterproofing spray, resulting in lung damage in users

The Swiss Toxicological Information Service (STIS) observed a steep increase in the number of enquiries about people suffering respiratory problems after using sprays for waterproofing leather and textiles. Examination of enquiry data revealed that three brands were implicated. STIS informed the Swiss Federal Office of Public Health, which ordered the withdrawal of the products from the market and alerted the public. Further investigations suggested that a reformulation of the products was responsible for causing lung damage (*OFSP Troubles respiratoires dus aux sprays imperméabilisants pour le cuir et les textiles; Un composé fluoré mis en cause* <http://www.bag.admin.ch/aktuell/00718/01220/index.html?lang=fr&msg-id=4080>).

During the same period the National Poisons Information Centre (NPIC) in the Netherlands observed the same phenomenon. The centre informed the Inspectorate for Health Protection, the products were withdrawn from the market and a warning was published in the national press. Because of export to other countries, the Inspectorate for Health Protection decided to inform the EU Member States through the Rapid Alert System for non-food consumer products (RAPEX). In addition, the NPIC informed the European poisons centres through the European Association of Poisons Centres and Clinical Toxicologists (*de Groot et al (abstract) (2004) J of Toxicology - Clinical Toxicology 42(4):443*).

### 3. Hazardous cosmetic products

The national poisons centre in Morocco (Centre Antipoison du Maroc) regularly analyses its enquiries to identify trends and problems. An analysis of enquiries received about poisoning with cosmetic products between 1980 and 2010 revealed that this was largely an urban problem predominantly involving adult females. Nearly two thirds of exposures involved para-phenylenediamine, a chemical used in hair dyes, artificial henna and some tattoo inks, which can easily be bought from herbalists as a



product called Takaout Roumia. The majority of these exposures were the result of intentional self-poisoning, with a mortality rate of around 18%. The poisons centre data also highlighted problems with skin lighteners of unknown formulation and hair straighteners containing acetone. This pattern of poisoning contrasts with that seen in many European countries, where exposures to cosmetic products are usually the result of accidental ingestion by children, generally with a good outcome. The poisons centre believes that this difference reflects the lack of regulation of cosmetic products in Morocco.

- [Intoxications par les produits cosmétiques](#)  
Sefiani H et al (2011) Toxicologie Maroc, 11(4), 5-8