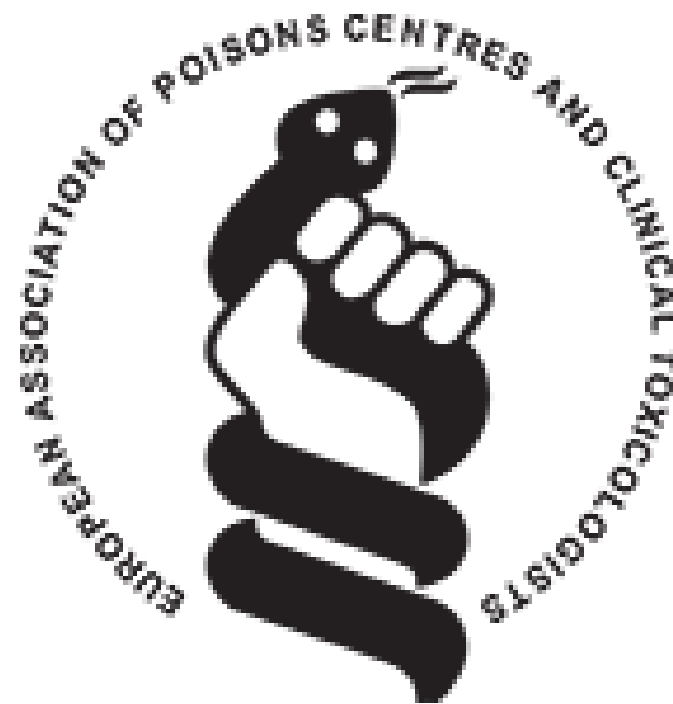


## New Frontiers in Clinical Toxicology The connection through toxicology and teratology

Georgios Eleftheriou, Raffaella Butera  
*Poison Control Centre, Bergamo, Italy.*



New Frontiers



Toxicology



Teratology

## Introduction

The first poison information centre (PCC) in Europe was established in the Netherlands in 1960 followed in 1963 by the UK NPIS. Since then, most of the European countries developed their national or regional poison control centers leading to the subsequent creation of European Association of Poison Centres and Clinical Toxicologists (EAPCCT) in 1964. The main mission is to develop, share and promote an advanced international knowledge on effective prevention, diagnosis and management of poisoning. In the teratology field, the creation of dedicated information centers is more recent: the UK Teratology Information Service (TIS), is the first TIS established in Europe and it provides scientific information to health care providers since 1983; the European Network of Teratology Information Services (ENTIS) was founded in 1990 and the primary aim is the prevention of birth defects and developmental disorders which arise as a consequence of maternal or paternal perinatal exposure to medicines and other substances. The function of these centres is similar to the PCC in that telephone inquiries are received and consultation, counselling, recommendations and risk evaluation are given. The PCC even if dealing primary with acute poisoning cases, are accessed for any toxicological issue, including teratological consultancy. Indeed in 2020 the World Health Organization published the updated Guidelines for establishing a PCC where it is reported that in certain cases a PCC is combined with or linked to a medicine and/or a TIS.



## Methods

In order to assess if there is a link between these associations, through the EAPCCT we invited the PCC in Europe to participate in a survey asking these centres if they provide information regarding the use of medicines during pregnancy and lactation in case that there is no a corresponding TIS in their country. The aim of this project was to identify the centres that offer this consultation, as well as to facilitate education and training in this area and to develop guidelines for TIS regarding research and information.

## Results

A total of 56 PCC from 28 European countries received the invitation to participate in the survey. Of these, 52 centres from 26 countries responded. A total of 28 Centres reported that they provide teratology information services; among them 17 of them were also interested in expanding their knowledge in the teratology field or even to set up a new TIS, as a separate (albeit integrated) entity from the PCC.

## Conclusions

The collaboration between the EAPCCT and ENTIS may be extremely beneficial in order to share information and to provide a training to the clinical toxicologists in the field of clinical teratology in countries where there isn't a TIS; this will in turn provide a benefit to the health care professionals who may lack an evidence-based knowledge on medication safety in pregnancy. Both associations have peculiar and complementary purposes and it is desirable that this collaboration will enhance and progress in the future.