Introduction and Aims
- Human contact with potentially harmful plants is frequent
- Most plants are harmless to humans, but there are a few that can cause toxicity
- Epidemiological literature in Central Europe is limited

Aim:
- To define the clinical relevance of plant toxicity for humans in central Europe
- To identify which plants may actually lead to severe poisoning, with a view to improving prediction of the expected clinical course of acutely intoxicated patients and avoiding unnecessary hospital admissions

Methods
- Retrospective case study
- Study period January 1995 to December 2009
- All cases of acute human exposure to potentially toxic plants reported to the STIC by the general public and healthcare professionals (first part)
- by physicians with written feedback and well-documented clinical course of acute mono-intoxications (second part)
- The referral population of the STIC is about 7.8 million people

Results
- 42,193 (9.9%) human plant exposures, with 80.6% children (< 16 y/o)
- 255 acute moderate, severe and lethal poisonings
  - Patients
    - 147 (57.6%) males and 95 (37.3%) females
    - 58 children (22.8%)
    - Age ranged from 2 months to 94 years
  - Course
    - 206 moderate
    - 45 severe
    - 4 fatal cases
- 47 different plants responsible
  1. Datura suaveolens/stramonium 75 (29.4%)
  2. Atropa belladonna 31 (12.2%)
  3. Euphorbia sp. 24 (8.4%)
  4. Heracleum mantegazzianum 17 (6.7%)
- Symptoms typical for the respective plant
- Outcome
  250 full recovery
  1 permanently impaired visual acuity (ocular contact with Euphorbia sp.)
  4 fatal (mitosis inhibiting or cardiotoxic plants)
Results

- Median hospitalisation time was 1 and mean hospitalisation time was 1.9 days in moderate, and 2 and 2.2 days respectively in severe cases.
- 52.5% accidental exposure, of which 91.4% children.
- 7.1% suicide attempts, all adults.
- 40.4% abuse, mainly adults, 5 children (mid-teens, of in total 58) with intentional ingestion.

Discussion

- Mostly, plant exposure was accidental (small quantities).
- Most overall enquiries concerned children and accidental intake.
- Typical patients for abuse were adolescents and young adults, with a clear male predominance.

Limitations

- Retrospective Case-Study design.
- Underreporting bias.
- Small numbers of patients.
- No laboratory confirmation.
- Difficulty to determine the toxin contents.

Conclusions

- Plant contact is rarely responsible for serious poisoning.
- Fatal intoxications are extremely rare and were caused by plants with cardiotoxic (Taxus baccata) or mitosis inhibiting (Colchicum autumnale) properties.
- A complete recovery can usually be expected even in severe cases.
Results

- Exposure to Datura and Atropa analyzed by gender, age and plant, irrespective of situation or severity of symptoms