



# **The human health impacts of the Oak processionary moth**

Dr Olivier le Polain,

Dr Barry Walsh

# OUTLINE



- 1. Pathogenesis**
- 2. Clinical aspects**
- 3. Public health impact**
- 4. Containment and mitigation**
- 5. Next steps**

# 1. PATHOGENESIS

- **caterpillar contains toxins in setae (thaumetopoein)**
- **contact with toxin may result from**
  - Touching caterpillar
  - Touching setae shed by the caterpillar in the environment
  - Airborne spread of the setae
- **Pathophysiology:**
  - Mechanical irritation
  - Pseudo-allergic reactions
  - Allergic reactions that can lead to anaphylactic shock

## 2. CLINICAL ASPECTS

### - **Lepidopterism:** clinical condition from contact with

**OPM** (from Maier et al, British J of Dermatology 2003;149:990-997)

#### - **Caterpillar dermatitis**

- Immediately after contact: intense itching
- Within 1-2 hours: dermatitis
- Delayed reactions, within 6-8 hours
  - rash of pin-sized papules, pustules and erythematous streaks, clears within 3-5 days
  - rash of solid uniform papules resembling insect bites, clears within 10 days

## 2. CLINICAL ASPECTS (II)



Utikal et al., Hautarzt 2009 · 60:48–50

## 2. CLINICAL ASPECTS (II)

### - **Lepidopterism (cont.)**

(from Maier et al, British J of Dermatology 2003;149:990-997)

- Conjunctivitis
- Upper respiratory symptoms
- Respiratory distress
- General malaise with fever
- Anaphylactic shock (Bosma, Jans, Ned Tijdschr Geneesk. 1998 Jul 4;142(27):1567-9)

### - **Treatment**

- dermatological corticosteroids (eg Triamcinolonacetonide 0.01%).
- Antihistamine drugs are not normally necessary

# 3. PUBLIC HEALTH IMPACT



## - Outbreaks

- Across Europe: Belgium, the Netherlands, Germany, France, Austria
- Mostly localised and small in size
- Major outbreak in the Netherlands in June 1996:
  - 4% of the population of a town of half a million was affected
  - >100 patients/day with caterpillar dermatitis in some GP surgeries

### 3. PUBLIC HEALTH IMPACT (2)



#### - **London outbreak in June 2006:**

- Residents reported numerous cases of itchy rashes to the EHO
- 51 cases identified, 47 of them in 24 households along a row of infested oak trees
- Attack rate high in residents living within close proximity of the trees (30m): 47/69 (68%)
- Symptoms: rash (100%), itchy eyes (29.7%), breathing problems (4.2%)

## 4. CONTAINMENT AND MITIGATION



- **Environmental action**
- **Public awareness** (leaflets, posters, websites etc)
- **Raise awareness amongst health professionals**  
(Dermatologists, Pharmacists, Walk-in clinics and GPs, Emergency Departments, NHS direct)
- **Surveillance ??** (local level? type of surveillance?)

## 5. NEXT STEPS



- **Annual Alert to Primary Care in London (? Surrey)**
- **Work with RBG Kew on Occupational Health study**
- **Discuss with PCT re Emergency planning**
- **Continue engagement with Forestry division**

Thank you!

