

# Autopsy guidelines: Anaphylaxis

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# Importance of history

- History and circumstances are paramount
- Drug history
- Allergy history
- Need to ascertain immediate events in detail: especially medication and food
- Circumstances and timings
- Medical notes

# Examination

- Swelling- externally and of mouth/airways
- Bites/stings – UK wasps and bees
- Blood/vitreous/urine
- Stomach contents – ingested allergens
- May look like a sudden cardiac death
- Histology & toxicology recommended
- Imaging may assist in some cases

# Tryptase – what to do

- Sample AM or peripheral blood
  - Universal, EDTA, heparin tube
- Include specimen details
  - Origin, time, date
  - Pre/post treatment
- Include clinical details
  - Medical history
  - Death scene
  - Time frames

# Tryptase - interpretation

- Tryptase is raised in many anaphylaxis...
  - ...but not all
- Tryptase can be raised for other reasons
  - Trauma, CPR, mast cell disorders, ESRF
- Talk to your immunologist
- Form a balanced opinion
- Consider analysis of specific IgE triggers
  - e.g. venoms, foods
  - Caution is still advised

# Modes of death

- Cardiac arrest secondary to peripheral vasodilation and myocardial ischaemia
- Asphyxia and respiratory arrest
- Delayed: hypoxic encephalopathy
- Subsequent cardiac pathology as sequelae of anaphylaxis



# Clinico-pathological summary

- Crucial to define clinical sequence of events
- Include everything you have done and include immunologist input
- Decide on **balance of probabilities**
  - *Is it reasonable to attribute death to anaphylaxis? If so what was the agent?*

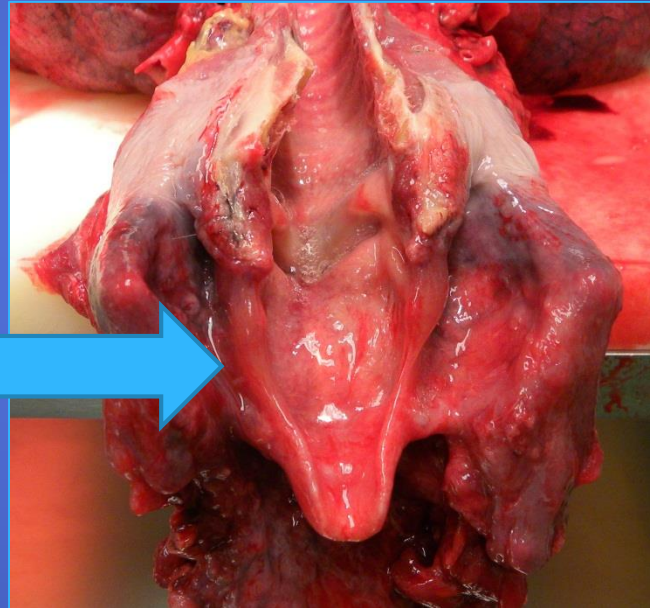
# Case study

- 70 year old man in gardening clothes
- Dead in living room
- EpiPen next to body
- Past history of anaphylaxis (twice due to wasp stings)
- Nil on external examination



# Internal examination

Epiglottic and laryngeal  
erythema and oedema



# Internal examination

- Oedematous lungs
- Enlarged heart with hypertensive LVH
- Hypertensive kidney changes
- Serum Tryptase level of **364.0ug/L**
- IgG 11.39g/L
- Tryptase results consistent with anaphylaxis