Brucellosis outbreak in Greece

Ioannis Karagiannis, HCDCP

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Brucellosis

• Zoonosis
• *Brucella melitensis*
• Unpasteurised milk or milk products
• Incubation period 5-60 days
• Symptoms in human
  – arthralgia
  – sweating
  – fever
  – headache
Brucellosis in Greece

• 149-337 human cases per year
  – mostly in high risk professions
• Never more than 6 cases per year in the Kavála prefecture
• Most islands enjoy a brucellosis eradication status
The event

• 16 May 2008: 7 cases of brucellosis are notified to HCDCP
  – Local public health (PH) authorities were aware and would investigate
• 20 May 2008: fresh cheese consumption had been reported by many cases
• 22 May 2008: visits from the local PH authorities to investigate circulation of cheese
A religious interlude

• Orthodox Easter: 27 April 2008 (end of w17)
• Fast throughout Lent, stricter in Easter week
• Local production of fresh cheese to be consumed as of Easter Sunday in Thásos
Central actions

• Communication to the international community (EuroSurveillance)
• Description of the cases in time, place and person (active surveillance)
• Design of an analytical epidemiological study (case-control study) in order to
  – Find the vehicle of the outbreak
  – Prevent future outbreaks
  – Save the world from brucellosis!
The continuation - Challenges

• Multidisciplinary approach
  – Case finding – ongoing outbreak?
  – Controls for the case-control study
    • “convenience sample” was used
  – Environmental investigation
Challenges (I)

• Case finding – ongoing outbreak?
  – Long incubation period
  – Hospitals, health centres, GPs
  – Tourists having traveled in the area
Challenges (II)

• Environmental investigation
  – Isolation of *B. melitensis* in
    • Cheese
    • Ruminants
  – Withdrawal of any cheese residuals
  – Teach the producers
All in all...

- Prefecture of Kavála
  - PH authority
  - Vet authority
- Clinicians
  - GPs
  - Health centres
  - Hospitals (wards, outpatient clinics)
- Labs
- HCDCP
Looking back in 2008

• First response and communication was timely
• Faster international communication
• Better choice of controls
• Set a head of the outbreak investigation
  – Though always a sensitive issue
• Faster analysis of study data
Always a learning procedure

• Natural experiment
  – Meant to expose all difficulties
• Challenges are “built-in”
• See it as a challenge to win
Thank you 😊